FINAL ENGINEER'S REPORT
AND
ENVIRONMENTAL IMPACT REPORT
On
Proposed Flood and Erosion Control Measures
For
Calabazas Creek
(Stevens Creek Blvd. to Interstate 280)

North Central Zone
Project Number 2010

SEPTEMBER 1977

Santa Clara Valley Water District

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SANTA CLARA VALLEY WATER DISTRICT

FINAL ENGINEERS REPORT

PROPOSED FLOOD AND EROSION CONTROL MEASURES FOR

CALABAZAS CREEK

(Stevens Creek Boulevard to Interstate 280)

NORTH CENTRAL ZONE

PROJECT NO. 2010

September 1977

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August 23, 1977

Honorable Board of Directors
Santa Clara Valley Water District
5750 Almaden Expressway
San Jose, California 95118

Board Members:

This is the Final Report on Proposed Flood and Erosion Control Measures for Calabazas Creek (Stevens Creek Boulevard to Interstate 280), Project No. 2010, in the North Central Zone of the Santa Clara Valley Water District.

The report identifies and assesses the potential damages from erosion and flooding, presents alternative solutions to the problems and evaluates those solutions, and makes specific recommendations for solutions.

The recommended project proposes realigning the creek in a double cell reinforced concrete box culvert between Stevens Creek Boulevard and Vallco Parkway Extension and a trapezoidal earth channel between Vallco Parkway Extension and Interstate 280 and building a new box culvert at Stevens Creek Boulevard. The estimated cost of the recommended project is $1,231,000. It is proposed that the District contribute $616,000 toward the project, and Vallco Park, Ltd., the adjacent property owner, contribute the remaining costs. The District's portion of the funds can be financed from the Series "C" 1973 Bond Sale for the North Central Flood Control Zone of the District.

I concur in the project as proposed and recommend that this Final Report be approved.

Sincerely yours,

John T O'Halloran

John T. O'Halloran
General Manager

Attachment

AN AFFIRMATIVE ACTION EMPLOYER

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SUMMARY

The portion of Calabazas Creek from Stevens Creek Boulevard to the Junipero Serra Freeway, Interstate 280, in Cupertino, California has the problems of potential flooding and erosion. The flooding threat is caused by an undersized box culvert at Stevens Creek Boulevard. The potential erosion is caused by steep slopes in the creek bottom and by adverse soil conditions. The soil is very susceptible to undercutting and bank failures.

The District staff analyzed six different solutions to the erosion and flooding problems. The staff concluded that a rock-lined trapezoidal channel would best solve the bank erosion problem and that a new box culvert at Stevens Creek Boulevard would best solve the flooding problem.

The property owner, Vallco Park, Ltd., requested that the District consider a double 9-foot wide by 11-foot high buried concrete box culvert within a 32-foot easement as an alternative solution.

The District responded to the request by having a draft Environmental Impact Report (EIR) prepared by a consultant (Environ) for the buried box culvert alternative. The draft EIR identified several impacts. The significant impacts were the permanent loss of a groundwater recharge potential and a permanent loss of a riparian habitat and wildlife corridor. The rock-lined channel alternative would have several impacts. These impacts are a permanent loss of groundwater recharge potential and a much reduced riparian habitat. The District staff then investigated a seventh alternative which is now the proposed project in this final Engineer's Report. In this report, the words "proposed project" refer to Alternative No. 7, which is a buried box culvert from Stevens Creek Boulevard to just downstream of Vallco Parkway Extension and a revegetated earth channel from Vallco Parkway Extension to I-280. The proposed project reduces the signifiant impacts that would have been caused by the box culvert alternative (Alternative No. 6). The proposed project also avoids several of the impacts of the rock-lined channel alternative (Alternative No. 4).

In light of the impacts of the rock-lined channel (Alternative No. 4) identified in the draft EIR, the District would have modified its project by substituting the rock-lined channel with an earth channel between Vallco Parkway Extension and I-280, but would have retained the rock-lined channel between Stevens Creek Boulevard and Vallco Parkway Extension. For comparison purposes, this alternative is called Alternative No. 8 in this report. Vallco Park, Ltd., is willing to pay the difference in cost between the proposed project (Alternative No. 7) and the modified District Alternative (Alternative No. 8). Vallco Park Ltd., is also willing to dedicate right of way to the extent called for in the District's dedication policy and to pay for one-half of the cost for revegetating the earth channel portion of Alternative No. 7.

The proposed project is an acceptable alternative to the modified District alternative. This project has the support of the Department of Fish and Game and of the State Water Resources Control Board.

The estimated cost to the District for a modified District alternative (a rock-lined channel between Stevens Creek Boulevard and Vallco Parkway Extension and a revegetated earth channel between Vallco Parkway and I-280) is $420,000. Approximately $400,000 could be contributed by the District toward the cost of the proposed project within the lands of Vallco Park, Ltd. An additional $216,000 would be needed for the box culvert at Stevens Creek Boulevard. The total estimated cost of the proposed project, including a new culvert at Stevens Creek Boulevard, is $1,231,000. The District's share of the cost is estimated to be $616,000.

The major adverse effects resulting from the proposed project and measures that can reduce (mitigate) the impact of these effects are as follows:

° Loss of an existing riparian habitat and the wildlife associated with it. The new 750-foot earth channel will be landscaped with native plants in an attempt to restore a riparian habitat.

° Probable interruption of a riparian corridor affording potential circulation for wildlife. It is difficult to determine whether undergrounding the upstream sections of the creek in a 1,100-foot box culvert (including the Stevens Creek Boulevard culvert) will definitely prevent migration of small mammals; however, it appears likely. This impact cannot be mitigated.

The major benefits of the project are:

° Prevention of flooding (up to one percent flood flows), which is caused by the inadequate capacity of the Stevens Creek Boulevard culvert.

° Elimination of bank failure, erosion, and downstream sedimentation.

° Conversion of the existing open creek channel to developable land.

INTRODUCTION

This is a report on a proposed flood and erosion control project on Calabazas Creek from Stevens Creek Boulevard to the Junipero Serra Freeway (Interstate 280) in Cupertino, California. The report recommends that the project consist of constructing a box culvert from Stevens Creek Boulevard to just downstream of Vallco Parkway Extension and a revegetated earth channel from Vallco Parkway to Interstate 280 and of constructing a new box culvert at Stevens Creek Boulevard.

Purpose of the Project

Ultimately, the proposed project, in conjunction with several other projects along Calabazas Creek, will eliminate the potential flooding and erosion problems along the entire creek, for at least the 1% flood.

Scope of this Report

This report describes, in detail, Calabazas Creek, its location, watershed, existing condition, capacity, and historic flooding. It also describes the design flood, alternative solutions, costs for these solutions, and the recommended project. The recommended project and its elements, costs, financing, and staging are fully described.

Previous Reports

This portion of Calabazas Creek was included in the January 1961 "Engineer's Report of Proposed Improvements for Zone NC-1, the North Central Zone", which was prepared by the Santa Clara County Flood Control and Water Conservation District, a forerunner

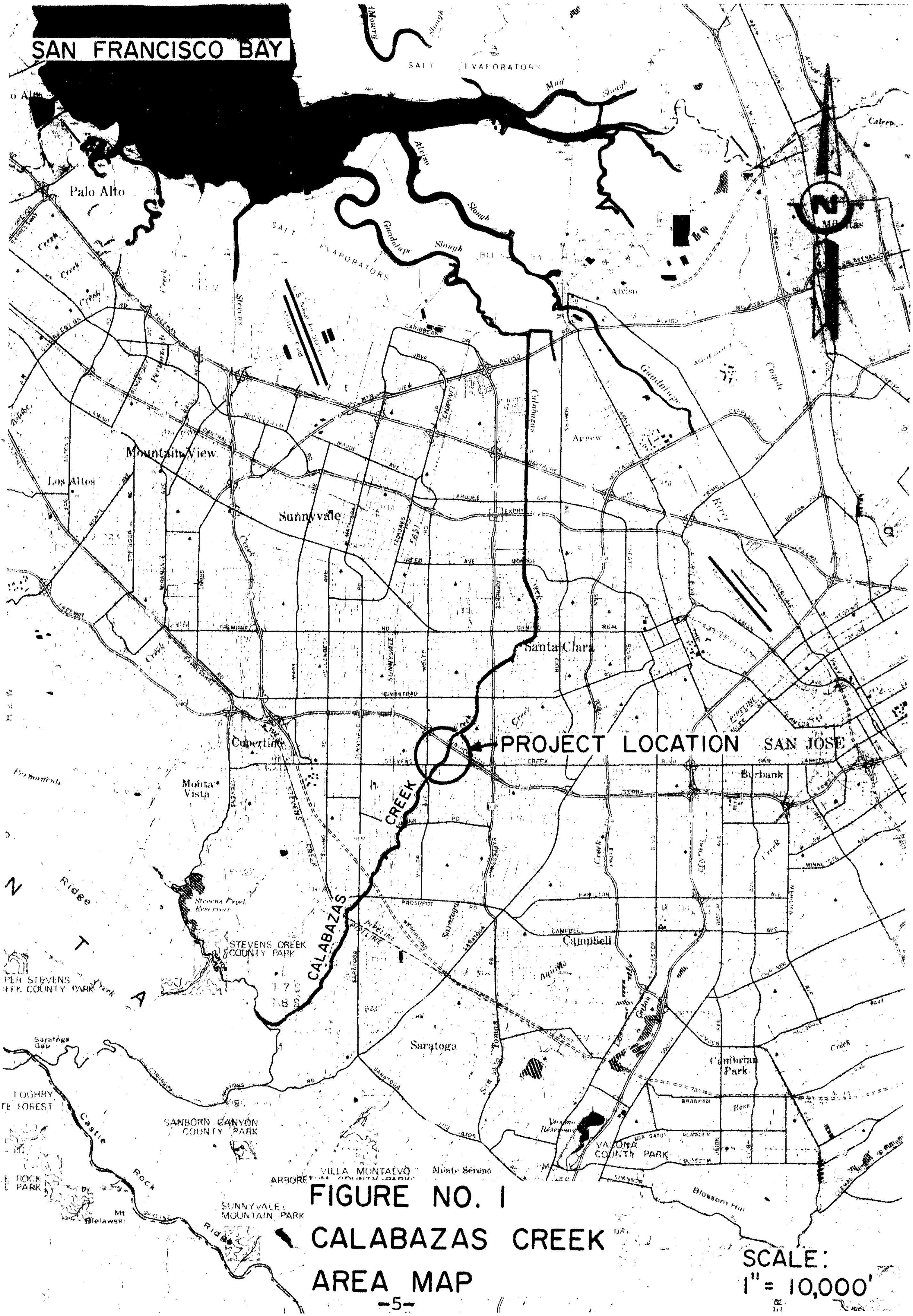

FIGURE NO. 1
CALABAZAS CREEK
AREA MAP

agency of the present Santa Clara Valley Water District. The purpose of that report was to discuss twelve proposed flood and erosion control projects in the North Central Zone for which a bond election to finance construction improvements was held. The report discussed all aspects of the flood problem of this zone. Control of erosion was a major consideration in the design of each of the proposed improvements. The type of improvement recommended for this portion of Calabazas Creek was the building of sacked concrete check dams in the existing channel at specific locations to control flood flow velocity. Reducing the flood flow velocity would also reduce erosion. The recommended project described in the 1961 report was not constructed because prior to the scheduled construction of the project a reevaluation of flood flow rates showed that the latest flood flow rate greately exceeded the previous one. The project recommended in the 1961 report is not suitable to handle the current flow rates.

The feasibility of dams in the watershed of Calabazas Creek has been dealt with in a number of previous reports. The first report discussing a dam on Calabazas Creek was the March 1921 "Report to the Santa Clara Valley Water Conservation Committee on the Santa Clara Valley Water Conservation Project" prepared by Fred Tibbetts and Stephen Kieffer. Other reports include the "1956 Wastewater Salvage Project" and the "Revised 1956 Wastewater Salvage Report" which were prepared by the Santa Clara Valley Water Conservation District, and the "December 1975 Master Plan for the Expansion of the In-County Water Distribution System" prepared by Santa Clara Valley Water District. None of these reports looked at building a dam from a flood reduction point of view. These reports were concerned with water supply and water conservation, although each recognized that flood reduction might be a consequence of building a dam and reservoir. For many and varied reasons, a dam on Calabazas Creek was never built. The likelihood of ever having a dam on Calabazas Creek has steadily declined in recent years because of the construction of many expensive single-family residences within the potential dam site.

Ongoing Studies of Other Portions of Calabazas Creek

The District has recently studied or is in the process of studying all of Calabazas Creek from Guadalupe Slough in the bayfront to the foothills of the Santa Cruz Mountains. Under study presently are the reaches from Guadalupe Slough to Bayshore Freeway (U.S. 101), Lawrence Expressway to Miller Avenue, and Miller Avenue to Wardell Avenue. In March, 1975 an engineer's report and environmental impact report were completed on the reach from the Bayshore Freeway to El Camino Real.

Public Participation Toward Selecting an Alternative

A public meeting was held on February 26, 1976, at Eton School in Cupertino to discuss alternative solutions to the flood and erosion problems along the subject reach of Calabazas Creek. The meeting was extensively advertised in the Cupertino area. Letters announcing the meeting were sent to all adjacent property owners, to the City of Cupertino, and to a large group of concerned citizens who have shown an interest in other District projects. In addition to these letters, handout announcements were given to all the children at Older and Portal Elementary Schools in Cupertino. Only a handful of people attended this meeting and most of them were property owners adjacent to the creek or their representatives. At this meeting the flooding and erosion problems were described and discussed.

A public hearing was held on March 23, 1977 by the District Board of Directors on the draft Engineer's Report and the draft Environmental Impact Report for the box culvert alternative. The public hearing was held at Cupertino High School on Finch Avenue in Cupertino. Both support for and objection to the box culvert was voiced. The Board directed the staff to circulate the draft reports to the State of California Clearing House before preparing the final Engineer's Report and final Environmental Impact Report.

DESCRIPTION OF THE PROBLEMS

This section discusses the flooding and erosion problems along the portion of Calabazas Creek that are the subject of this report. This section describes, in detail, the project location, watershed, existing creek, historic flooding, design flood, channel capacity, and erosion potential.

Location of the Proposed Project

Calabazas Creek originates in the foothills of Santa Cruz Mountains and flows in a northerly direction through the cities of Saratoga, San Jose, Cupertino, Santa Clara, and Sunnyvale into southern San Francisco Bay. The portion of the creek that is the subject of this report is located in Cupertino from just upstream of Stevens Creek Boulevard northerly to Junipero Serra Freeway. This reach of the creek is about 1700 feet long and is shown on Figure 2.

Description of Watershed and Channel

Calabazas Creek begins in the foothills of the Santa Cruz Mountains and flows northerly to San Francisco Bay, traversing the subject reach about midway along its course. The creek watershed is entirely within Santa Clara County. The watershed is bounded on the west by the Stevens Creek Watershed and on the east by the Saratoga Creek Watershed. The portion of the watershed that is tributary to Calabazas Creek upstream of Interstate 280 covers an area about 11 square miles. About one-third of this area is hilly terrain, and the balance being relatively flat valley floor. Watershed elevations vary from approximately 2,000

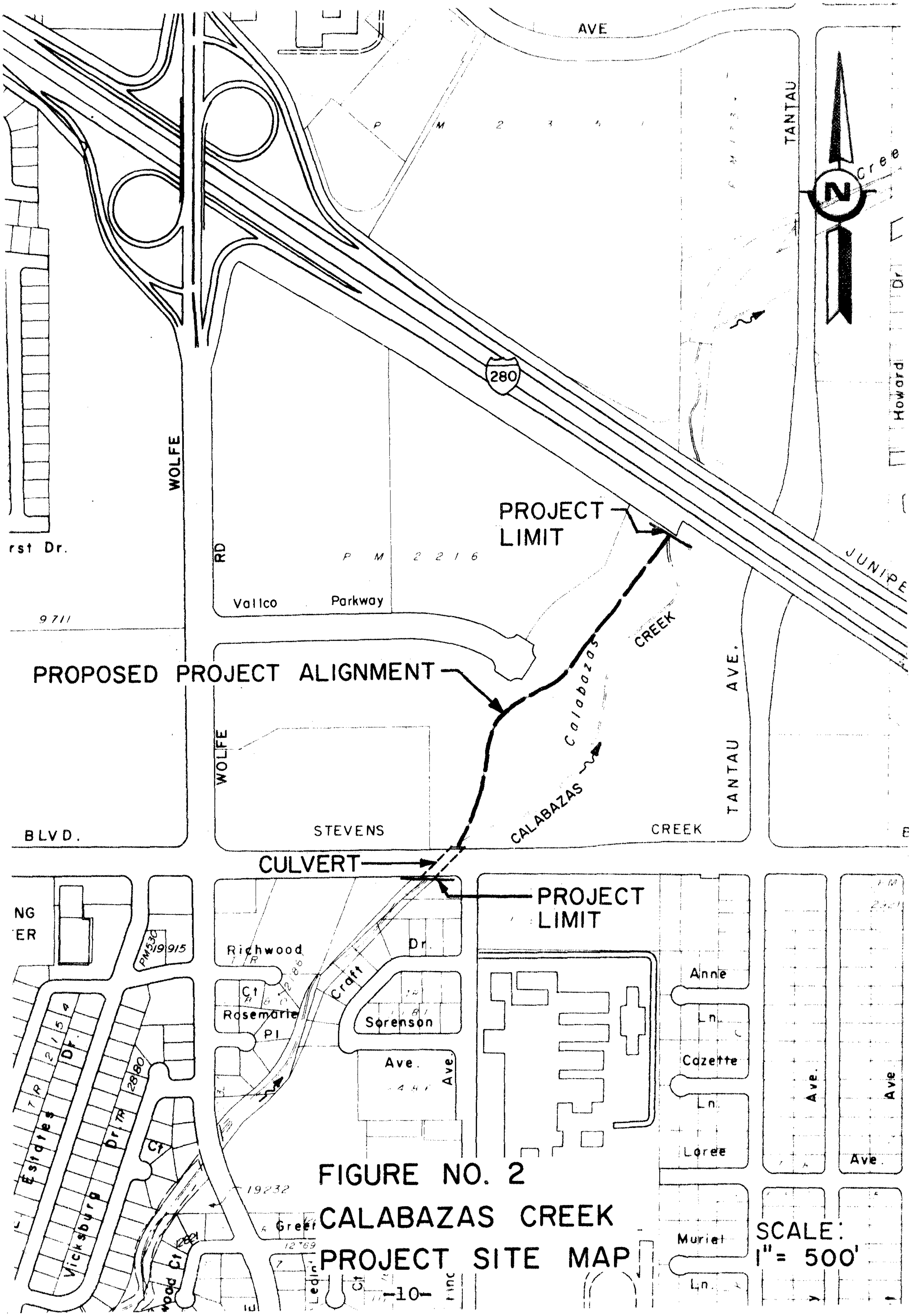

FIGURE NO. 2
CALABAZAS CREEK
PROJECT SITE MAP

SCALE:
1" = 500'

feet to less than 160 feet above sea level at Interstate 280. The hills are characteristically brushy woodlands having predominantly oak (white and live), buckeye, and bay trees. The gently sloping valley floor portion of the watershed has been extensively urbanized. Figure 3 shows a map of the Calabazas Creek Watershed and better illustrates the general topography of the area.

The area has a generally mild climate. Temperatures range from an average high of 81 degrees during July to an average low of 49 degrees in January. The hilly lands of the basin have a mean annual precipitation of approximately 37 inches and the valley floor about 16 inches. About 90 percent of the rainfall takes place in the five winter months, November through March. The steep nature of the upper portion of the tributary watershed results in short duration, high intensity runoff for most major storms. After each major runoff, low flows continue in the stream for several weeks as water temporarily stored in the watershed seeps into the streams.

Compared to the valley portion of the watershed, little development has taken place in the upland portion. It is unlikely that much development will occur in the future because of the geologic hazards and topography of this area. The relatively flat valley floor, on the other hand, has been extensively developed in recent years. Field and orchard lands have been transformed into residential subdivisions, shopping centers, and commercial areas. Some undeveloped land does remain, including that land bordering Calabazas Creek within the proposed project limits. This

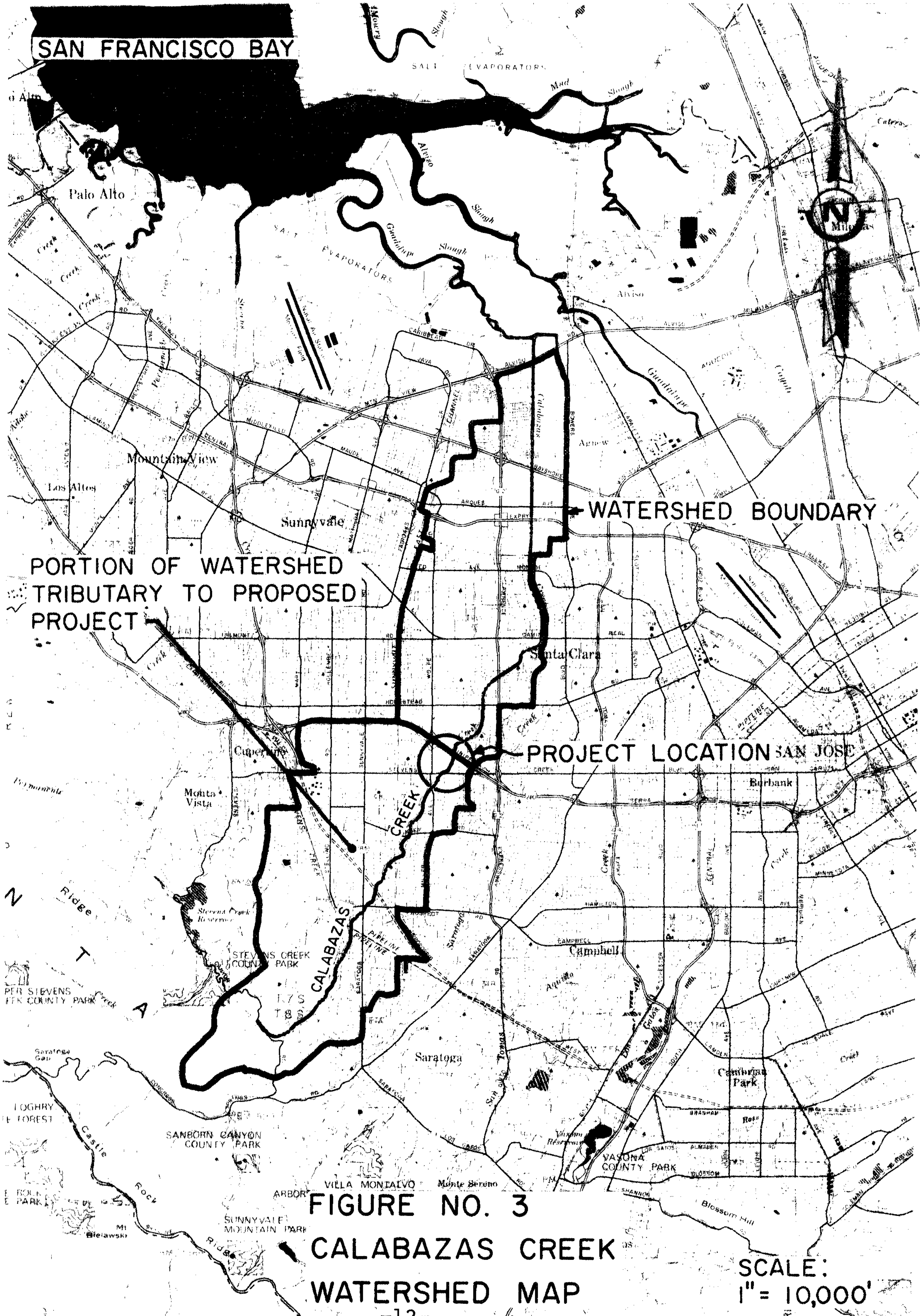

FIGURE NO. 3

CALABAZAS CREEK

WATERSHED MAP

SCALE:
1" = 10,000'

property is owned by Vallco Park, Ltd., a corporation which purchased the property in 1965 with the intention of developing the property into a commercial center.

The existing creek within the proposed project limits is not a natural streambed. This area was part of a floodplain until about 1850 when local farmers joined together to excavate a drainage ditch to eliminate a marshy condition. The ditch roughly followed existing property lines. That original alignment has been modified because of erosion and bank failures.

The creek today meanders through old orchard land between the concrete box culverts at Interstate 280 and Stevens Creek Boulevard. Channel side slopes vary from nearly vertical to about 30 degrees from the horizontal. Junipero Serra Channel runs parallel to Interstate 280 and outfalls into Calabazas Creek immediately upstream of the Interstate 280 culvert. The Calabazas Creek channel is about 70 feet wide and 15 feet deep.

Calabazas Creek meanders through alluvial deposits. These deposits consist of different layers of sand, gravel, silt, and clay. Severe erosion damage exists along both banks of the creek throughout the project reach. Parts of the creek are overgrown with brush and small trees, particularly the upstream area near Stevens Creek Boulevard. Please refer to the Environmental Impact Report for a detailed description of the channel vegetation.

Calabazas Creek is usually dry during the summer months. This dry condition eliminates fish life in the channel. The creek supports various types of animal life that can find water elsewhere during the dry months.

The District does not normally use the subject reach of Calabazas Creek for natural groundwater recharge because water is not always available. However, the lower one-half of this reach (Vallco Parkway to Interstate 280) does have a potential for groundwater recharge. When the overall water management plan allows, groundwater recharge flows can be released into the stream from the Stevens Creek pipeline, just south of Prospect Road in Saratoga. It has been estimated that one-half to one acre-foot of water per day (326,000 gallons per day) could be recharged into the groundwater basin in Calabazas Creek between Vallco Parkway Extension and Interstate 280. Soil borings taken after the Draft EIR was circulated for public review revealed that from Stevens Creek Boulevard to Vallco Parkway Extension very little or no groundwater recharge potential exists because of underlying clay layers.

Historic Flooding

Calabazas Creek has a history of flooding in two locations. These locations are north of El Camino Real in Santa Clara and along Highway 9 in Saratoga. Significant flooding occurred at both these locations during the December 1955 and the April 1958 floods, which ravaged large portions of Santa Clara County. During these floods, diligent work by the road crews of the City of Cupertino and Santa Clara County kept the box culvert under Stevens Creek Boulevard from plugging with debris and causing extensive flooding and damage to Stevens Creek Boulevard. Flooding was not significant at Stevens Creek Boulevard during these floods.

Floodwater gauging stations were installed on Calabazas creek in 1946. Currently, one station is located at Rainbow Drive in Cupertino, and the other is located just south of

Monroe Avenue in Santa Clara. Table 1 presents a synopsis of the 10 highest recorded flood flows since 1946.

TABLE 1

LARGEST FLOOD FLOWS ON CALABAZAS CREEK 1946-1975

No.	Flow Rate in Cubic Feet Per Second	Date
1	2470 cfs	12/22/55
2	2000 cfs	04/02/58
3	1800 cfs	01/31/63
4	1600 cfs	01/30/68
5	1490 cfs	01/26/69
6	1350 cfs	02/16/59
7	1220 cfs	02/01/75
8	1200 cfs	01/21/64
	1200 cfs	01/24/67
9	1005 cfs	11/28/70
10	1000 cfs	01/11/52

Source - Santa Clara Valley Water District Gauging Station 26A

Design Flood

The proposed project has been designed to convey the "1% flood". The "1% flood" is the largest flood flow which could be expected to be equaled or exceeded on an average of once in one hundred years over a long period of time. It is the flood flow which has a one percent chance of being equaled or exceeded in any one year. It cannot be overemphasized that flows much higher than the 1% flood could occur sometime in the future. Thousands of acres of developed land in the United States have been severely damaged by floods that were larger than the 1% floods. Despite this fact, there is a reasonable limit to the level of flood protection that should be provided to an urbanized area. Throughout the United States this reasonable level is generally recognized to be the 1% flood. This is the level used by most federal agencies, including HUD, for their flood insurance programs. The policy of the Santa Clara Valley Water District is to provide flood protection for the 1% flood for streams having watersheds larger than four square miles.

The 1% flood for Calabazas Creek between Stevens Creek Boulevard and Interstate 280 has been determined to be 2,800 cubic feet of water per second (cfs).[1/] As can be seen from Table 1, flood flows approaching the 1% flood flow have occurred during the last 30 years.

Description of Flood Problem

The existing channel between Stevens Creek Boulevard and Interstate 280 has the capacity to convey the 1% flood flow. However, the box culvert of Stevens Creek Boulevard is large enough to pass only about one-half of the 1% flood flow rate. As a result, during the occurrence of the 1% flood, the Stevens Creek Boulevard culvert will cause floodwaters to leave the channel upstream of Stevens Creek Boulevard. This water will build up enough depth to flow northerly across Stevens Creek Boulevard and cause a sheet of water to flood the land adjacent

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[1/] One cubic foot of water per second is equivalent to 450 gallons of water per minute and 1,800 liters of water per minute.

to the subject reach of Calabazas Creek, down to Junipero Serra Freeway. Approximately 50 acres of land will be inundated by this sheet flooding, as shown on Figure 4.

The land adjacent to the creek between Stevens Creek Boulevard and Interstate 280 subject to the flooding described above is presently vacant. Little damage would result if flooding occurred to the land now. However, when this land is developed for commercial uses, as planned by the owners, significant flood damages could result.

Description of Erosion Problem

The existing channel throughout the subject reach of Calabazas Creek is susceptible to severe erosion. Erosion is a problem for two reasons. First, soil that is eroded from the channel bottom and banks and washed downstream is deposited in the stream channel near San Francisco Bay. These deposits reduce the capacity of the downstream channel to convey flood flows. It is very expensive to remove these deposits. Second, the erosion process undercuts the channel banks and causes large wedges of bank material to fall into the channel. This continual undercutting and sloughing of bank material causes the channel to become continually wider. Buildings or streets that are built near the top of existing banks could be endangered.

The channel is between 14 and 16 feet deep and cuts through three soil layers. Figure 5 shows typical cross sections of the existing soil layers and a plan view of areas with significant erosion. The top layer is silty clay loam with some gravelly clay. The middle layer, which is about 6 to 8 feet thick, is a

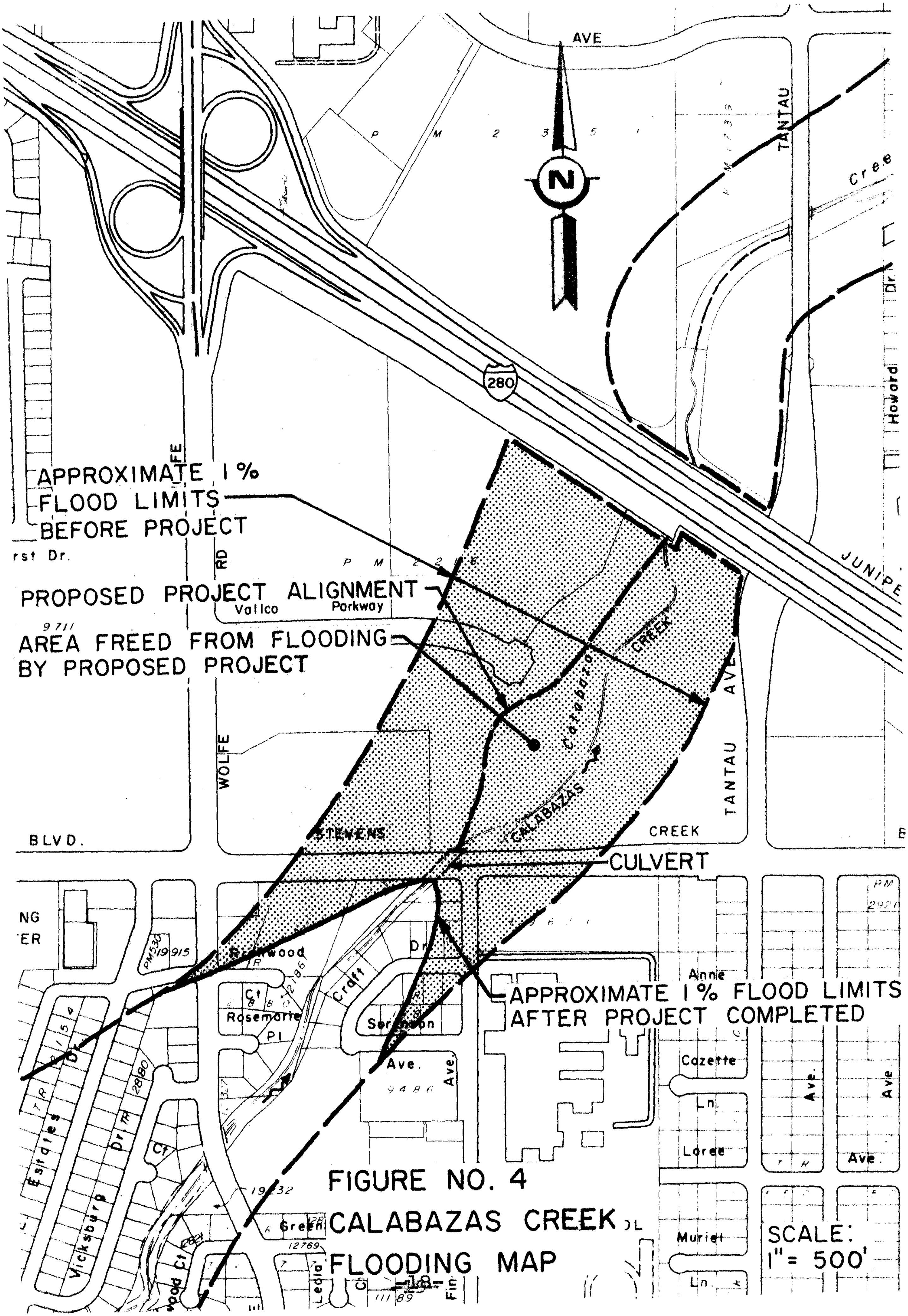


FIGURE NO. 4
CALABAZAS CREEK
FLOODING MAP

SCALE:
1" = 500'

clay loam. The soil in this zone is subject to extensive shrinkage cracking. Soil with shrinkage cracking has very little tensile strength. The bottom zone, which is greater than 2 feet thick and contains the channel bottom, is a combination of clay loam, sandy clay, and gravelly clay. This bottom soil layer in the low flow area of the channel is very susceptible to being undercut during flood flows. Consequently, the channel banks, particularly the west bank, are unstable.

These soil conditions are particularly significant because the existing channel bottom slope is steep and produces high velocity flood flows. These flood flows scour the erodible toes of the channel banks, which, in turn, cause the cracked, unstable channel banks to be undercut and to collapse.

Stream bank failures have been common in the past. The existing channel banks are very steep everywhere and nearly vertical at some locations. This situation lends itself easily to continued erosion and bank failure. The proposed project will not increase the risk of erosion upstream of Stevens Creek Boulevard or downstream of Interstate 280.

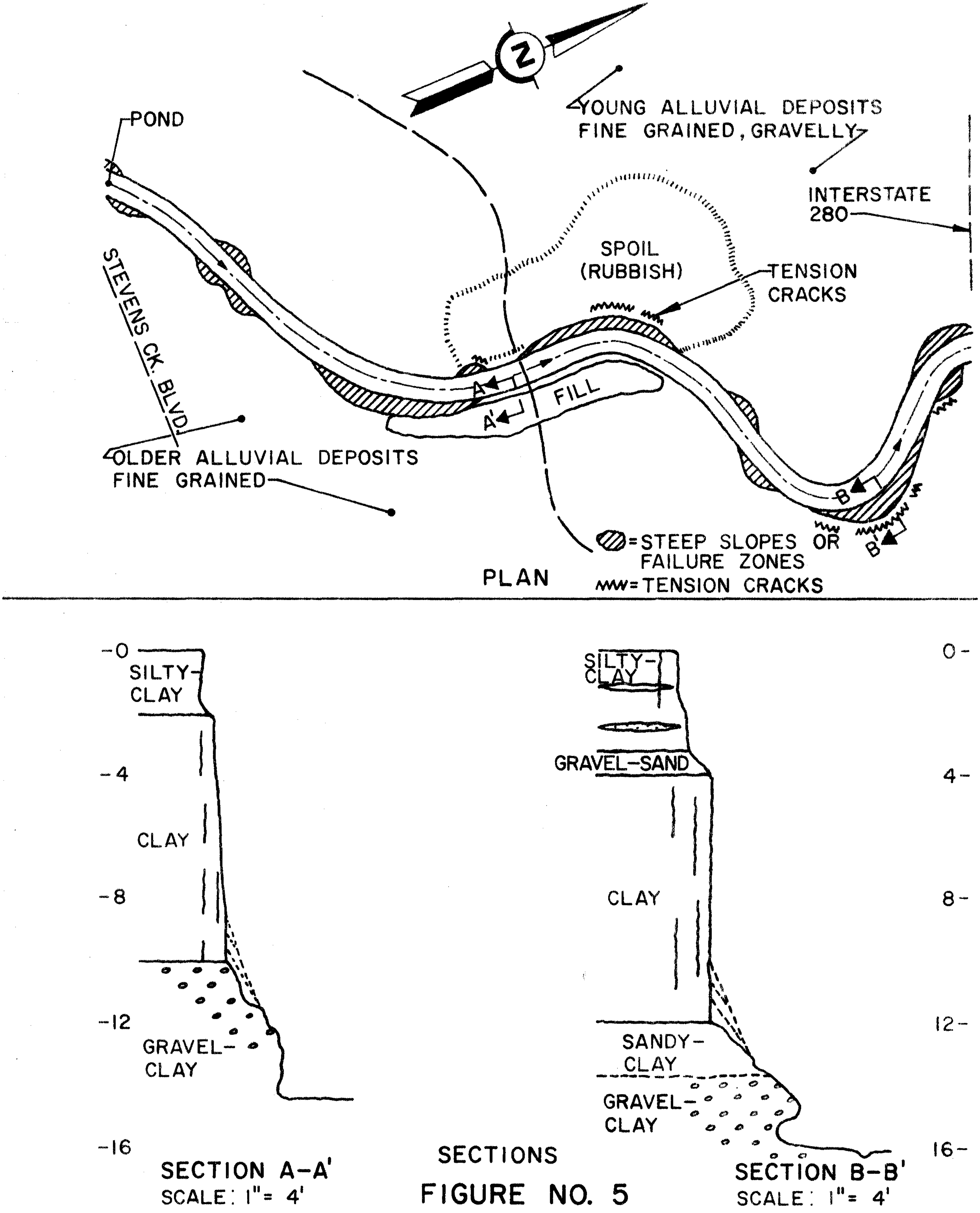


FIGURE NO. 5
CALABAZAS CREEK
GEOLOGIC PLAN & CROSS SECTIONS

ALTERNATIVE SOLUTIONS STUDIED

This section will present the range of possible solutions, the specific alternatives studied, the estimated costs for these alternatives, and the relative merits of each alternative.

Range of Possible Solutions

There are three generally recognized methods to solve flooding and erosion problems along streams. One method is to restrict from the natural floodplain of the stream all buildings and facilities that could possible be damaged by flooding, siltation, or erosion. This is the so-called floodplain management technique. This method generally works well where streams have well-defined floodplains, buildings have not yet been built within the floodplains, and land values are not high. This method can be used by an agency which has land use and zoning power, such as a city or county. The Santa Clara Valley Water District does not have power to enact land use regulations. However, when this alternative appears to be the best solution to a flooding problem, the District will recommend to the local jurisdiction that floodplain zoning be adopted.

A variation of the floodplain management technique, although not a solution to physical flooding and erosion problems, is flood insurance. The National Flood Insurance Program, established by Congress in 1968, makes flood insurance at subsidized rates available to cities and counties who choose to join the program. To join the program, a city must designate flood hazard areas and adopt and enforce floodplain management measures that will diminish the impact of floods.

Another method is to reduce flood flows by means of reservoirs or diversions. Reservoirs store flood flows for later release while diversions remove flood flows from the stream and divert them into other streams. This method generally works well when there are good sites for the construction of dams or when there is a nearby stream which has an excess capacity to carry flood flows.

A third method is to construct channels big enough to convey the flood flows. The channel is sized to convey, without flooding or erosion, all the flood flows that could be expected to reach the site during the design flood. Examples of this method are excavated earth channels, underground conduits, concrete-lined channels, rock-lined channels, and combinations or variations of these facilities.

Each flood- and erosion-prone area must be analyzed to determine which method is best suited to solve the particular problems of the area. Factors such as physical features, property ownership, environmental restraints, economic realities, financial limitations, social attitudes, community desires, and other political considerations greatly affect the type and method of protection a problem area may receive. All these factors narrow the practical alternatives to a manageable few. From these alternatives, the optimum project is selected. The optimum project may use a single method or may be a combination of all three methods.

For a number of reasons, Calabazas Creek from Stevens Creek Boulevard to Interstate 280 is best served by the third method. Calabazas Creek does not have an easily definable natural floodplain.

Once floodwaters leave the existing channel, these waters spread over the flat valley floor. The undeveloped, vacant land in the vicinity of Calabazas Creek has high value, thus encouraging maximum land use. The City of Cupertino, the agency responsible for zoning and land use regulations, has not floodplain-zones any of the vacant land adjacent to the channel. These two factors essentially precludes using the first method.

As previously stated, numerous reports on the suitability of upstream reservoirs on Calabazas Creek have been compiled. None of these reports identifies an economically suitable site for a reservoir. Moreoever, there are no streams with excess capacity reasonably near Calabazas Creek to which excess flood flows could be diverted. These two factors make the second method equally impractical.

It is therefore apparent that the third method is the most practical solution for this portion of Calabazas Creek. The construction of facilities that will convey flood flows is the only solution to the flood and erosion problems. Therefore, this is the solution selected for this project.

Descriptions of Alternatives Studied

Eight specific alternatives to solve the flood and erosion problems at this site were evaluated. Six alternatives were evaluated in the draft report, but two more alternatives were added to this final report. These alternatives differ principally in the treatment of the channel from Stevens Creek Boulevard to Interstate 280. All alternatives include the removal of the box culvert and construction of a new box culvert at Stevens

Creek Boulevard. Shown below is a list of the alternatives studied:

	Alternative No.	
	1	Preserve the Existing Channel
Method A	2A	Modify and Stabilize the Existing Channel
Method B	2B	Modify and Stabilize the Existing Channel
	3	Earth Channel
	4	Rock-Lined Channel
	5	Concrete-Lined Channel
	6	Buried Concrete Box Culvert
	7	½ Box Culvert - ½ Earth Channel
	8	½ Rock-Lined Channel - ½ Earth Channel

Certain features of channel design are common to all the structural alternatives. All alternatives except the buried box culvert have landscaping, fencing, and maintenance access roads associated with them. Each alternative except the buried concrete box culvert would have a specifically designed landscaping theme which would best complement the proposed alternative. A six-foot chain link fence along each right of way line would be included in all alternatives except the buried concrete alternative, where it would be unnecessary. Two maintenance access roads, one along each top of bank, are included in all alternatives except the concrete-lined channel and the buried box culvert alternative. The maintenance access roads for the earth channel could be lowered into the channel side slopes if this design would make the revegetation of the channel easier. See Figure 14.

Concrete channels require only one maintenance access road because the hard concrete lining allows maintenance vehicles to drive along the channel bottom. Buried concrete box culverts have no need for continual ground surface maintenance access roads.

Alternatives No. 1, 2A and 2B follow the exact alignment of the existing channel. Alternatives No. 3, 4, 5 and 8 follow the alignment of the existing channel, except where the meander just south of Interstate 280 has been removed by rerouting the channel across the neck of the meander. Alternatives 6 and 7 follow an alignment that is offstream but one that allows optimum use of the surrounding land.

Alternatives No. 3, 4, 5 and 8 could follow other alignments from Interstate 280 to Stevens Creek Boulevard, but other alignments would cost more. Excavation and earthwork quantities would substantially increase along any alignment outside the bounds of the existing channel, thus increasing the construction costs. Figure 6 shows the different alignments.

The details of each alternative will be discussed in the following paragraphs.

Alternative No. 1. Preserve the Existing Channel

This alternative would consist of acquiring sufficient right of way to allow the channel to find its own state of equilibrium through the erosion process. It is reasonable to assume that bank failures will continue for a period of time until the banks attain a flatter side slope and no longer erode. The amount of right of way required for this alternative has been computed by

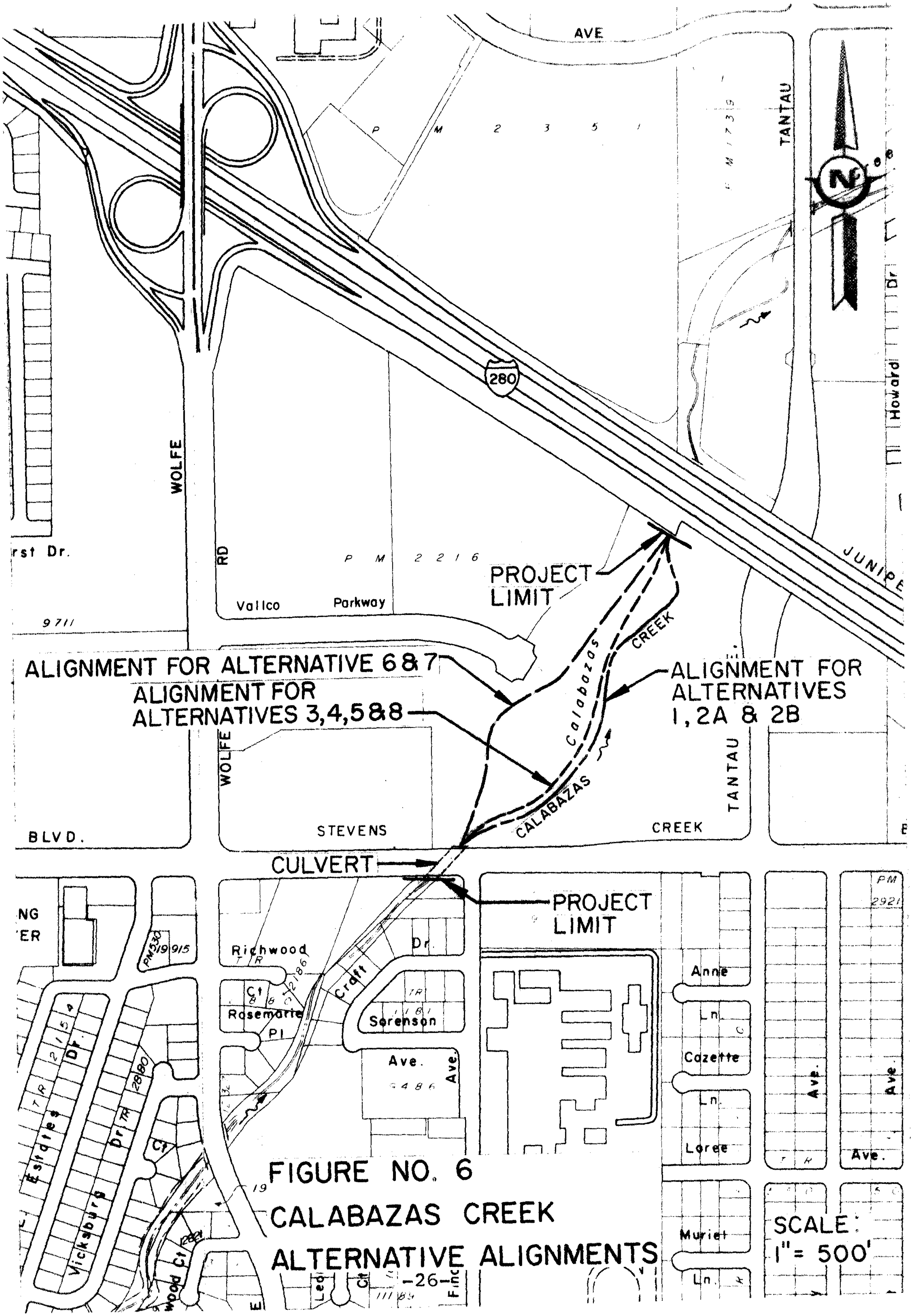
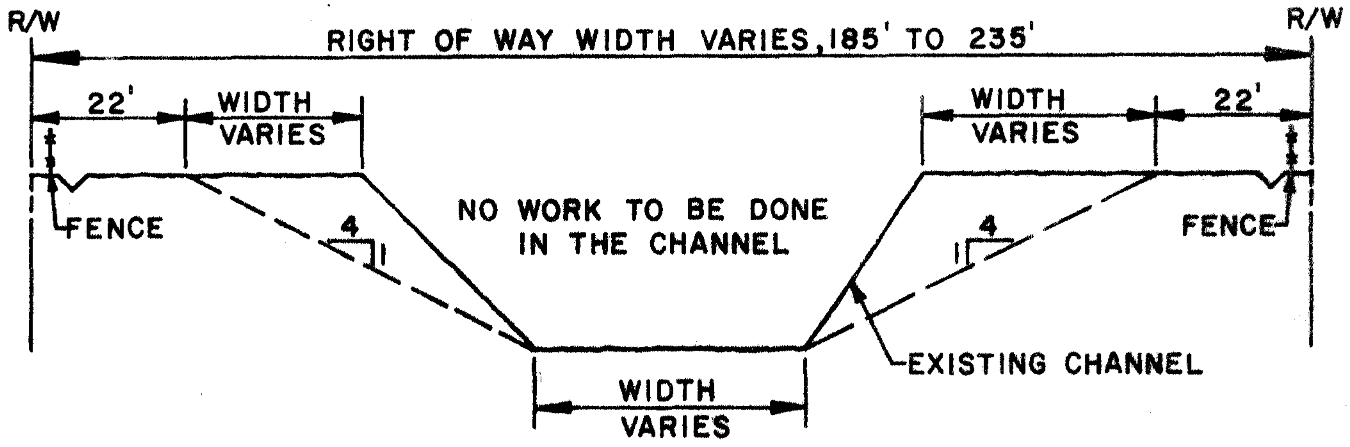


FIGURE NO. 6
CALABAZAS CREEK
ALTERNATIVE ALIGNMENTS

SCALE:
1" = 500'

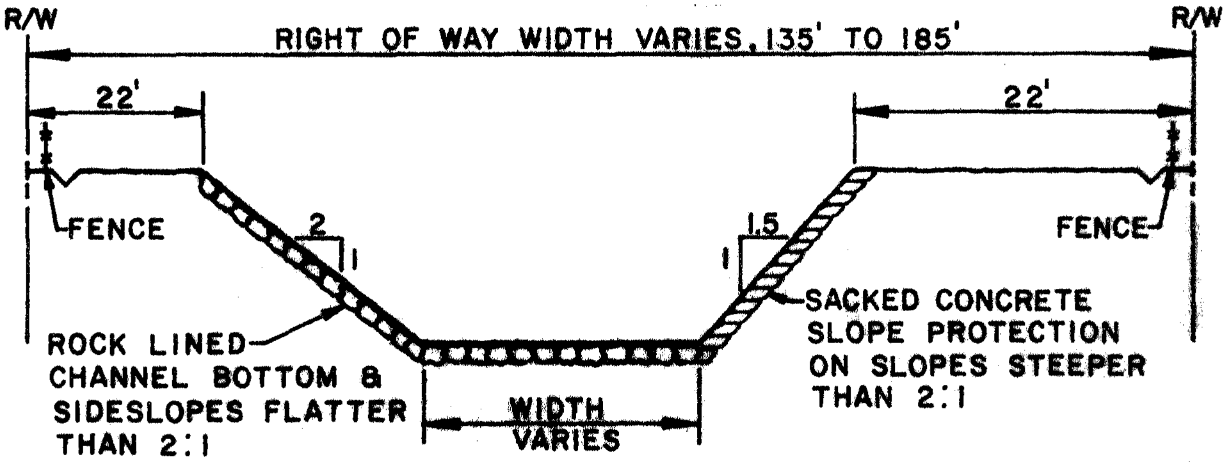
projecting a 4-to-1 (4 horizontal to 1 vertical) sloped line from the toe of the channel to the ground surface and then adding a 22-foot-wide strip for a maintenance access road along each bank. The width of this right of way varies from 185 feet to 235 feet. Natural channel vegetation will help to stabilize the channel. Figure 7 shows a typical cross section of this alternative.



ALTERNATIVE NO. 1
PRESERVE EXISTING CHANNEL
FIGURE 7

Alternative No. 2. Modify and Stabilize the Existing Channel

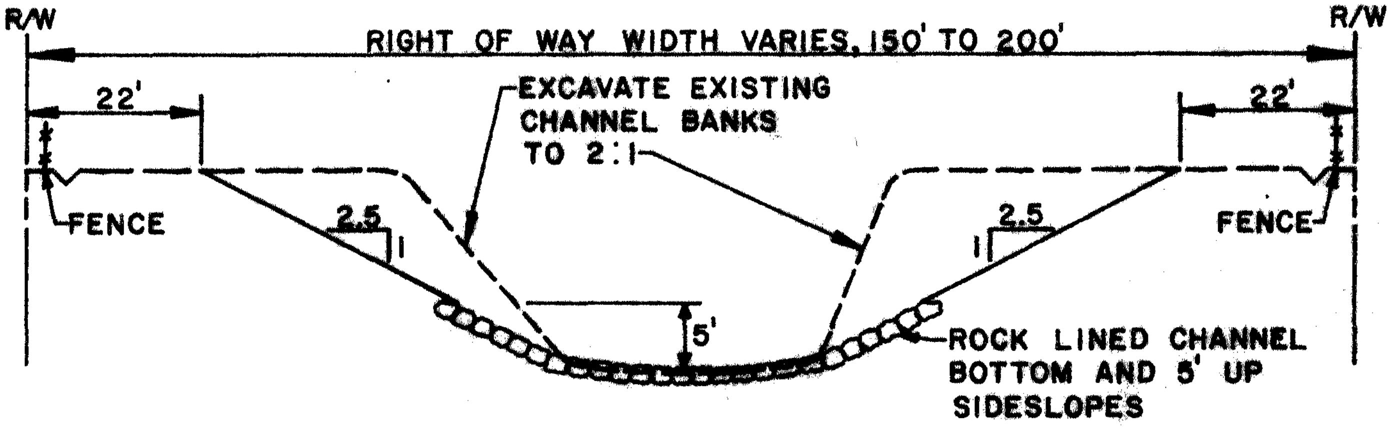
Two different methods to modify and stabilize the existing channel were considered. Alternative No. 2A would consist of excavating back the steepest banks to 1.5-to-1 side slope and placing sacked concrete slope protection on these slopes and all slopes steeper than 2 to 1. A protection layer of rock would be placed over channel side slopes flatter than 2 to 1, and thus susceptible to erosion, and over the channel bottom. The right of way required for this alternative would vary from 135 feet to 185 feet. Figure 8 shows a typical cross section for this alternative.


R/W
RIGHT OF WAY WIDTH VARIES, 135' TO 185'
R/W
22'
22'
FENCE
2
1
1.5
1
FENCE
ROCK LINED CHANNEL BOTTOM & SIDESLOPES FLATTER THAN 2:1
SACKED CONCRETE SLOPE PROTECTION ON SLOPES STEEPER THAN 2:1
WIDTH VARIES

ALTERNATIVE NO. 2A
MODIFY AND STABILIZE EXISTING CHANNEL
FIGURE 8

The second method to modify and stabilize the existing channel, Alternative 2B, would consist of excavating back all side slopes to a 2.5-to-1 slope and placing a blanket of rock over the toe and bottom of the channel. The right of way required for this alternative would be the same as for Alternative No. 1. Figure 9 shows a typical cross section for this alternative.

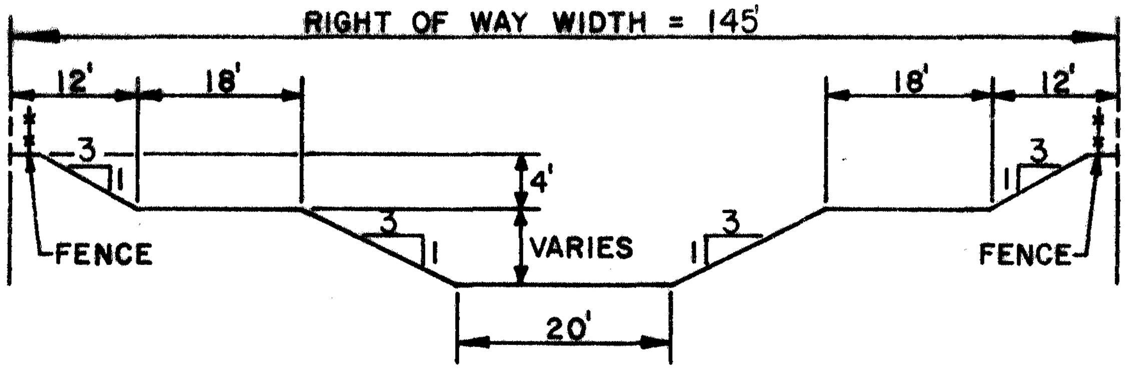
Both alternatives would require maintenance access roads, one along each bank.


R/W
RIGHT OF WAY WIDTH VARIES, 150' TO 200'
R/W
22'
22'
EXCAVATE EXISTING CHANNEL BANKS TO 2:1
FENCE
2.5
1
2.5
1
FENCE
5'
ROCK LINED CHANNEL BOTTOM AND 5' UP SIDESLOPES

ALTERNATIVE NO. 2B
MODIFY AND STABILIZE EXISTING CHANNEL
FIGURE 9

Alternative No. 3. Earth Channel

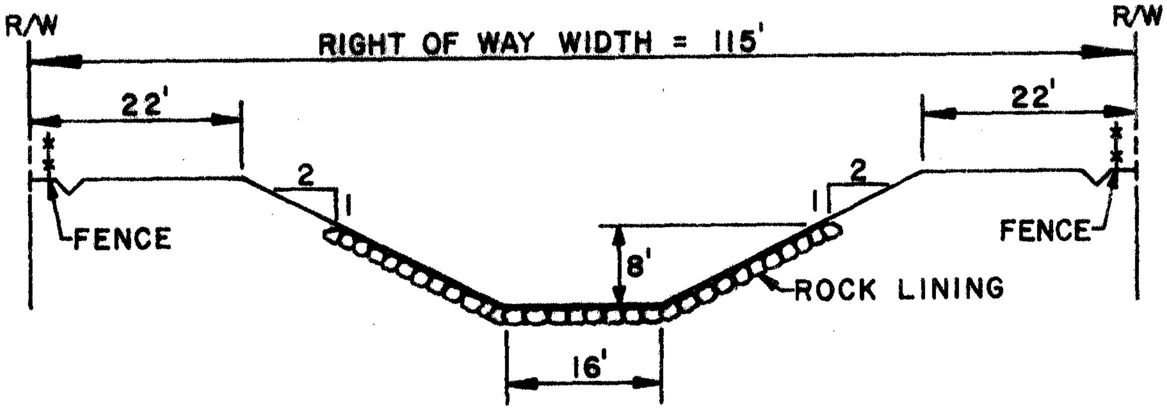
This alternative would consist of an excavated trapezoidal earth channel. The channel sideslopes would be excavated to a 3-to-1 slope. Two maintenance roads are required for this alternative. The maintenance roads would be lower than the surrounding land. The right of way needed is 145 feet wide. Figure 10 shows a typical cross section of this alternative.



EARTH CHANNEL
SHOWING MAINTENANCE ACCESS ROADS
FIGURE 10

Alternative No. 4. Rock-Lined Channel

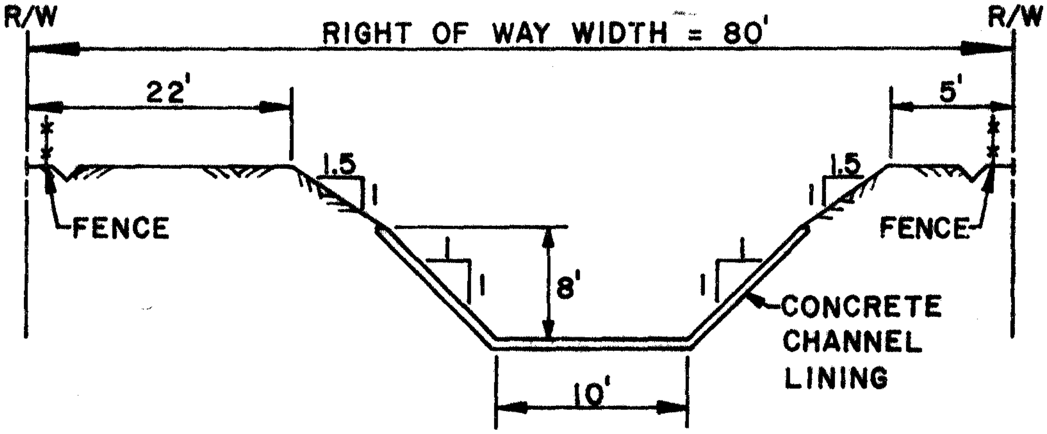
This alternative would consist of excavating an earth channel and then placing a protective layer of rock over the bare earth. Concrete grade control structures would not be required because the protective rock layer would allow the floodwaters to flow much faster without eroding the channel than would the bare earth channel. Two maintenance access roads would be required. The required right of way would be 115 feet. Figure 11 shows a typical cross section.



ALTERNATIVE NO. 4
ROCK LINED CHANNEL
FIGURE 11

Alternative No. 5. Concrete-Lined Channel

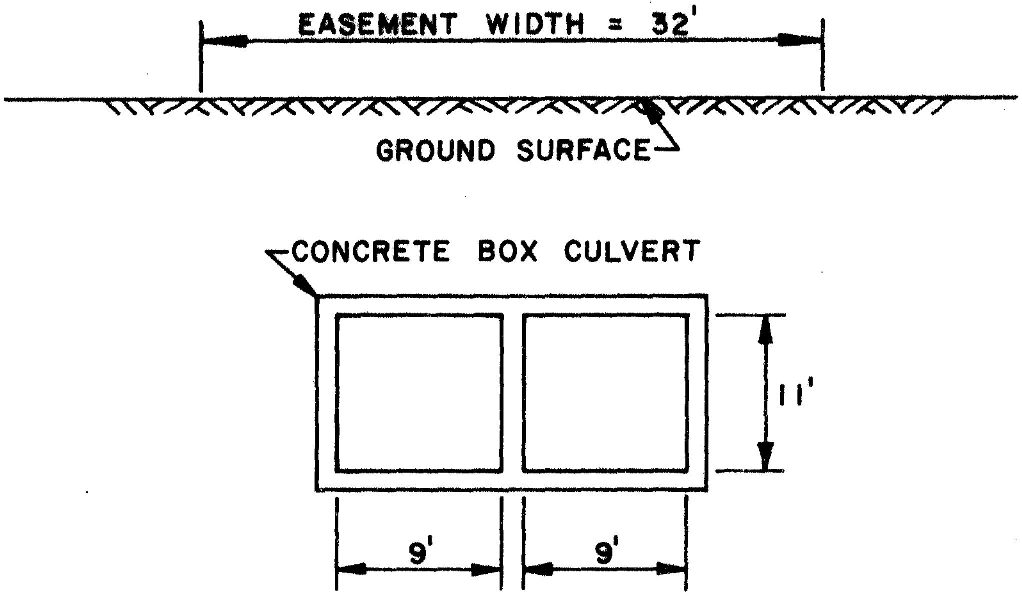
This alternative would consist of excavating an earth channel and then placing a protective concrete slab over the bare earth. Concrete grade control structures would not be required because the hard concrete surface is very erosion resistant. Only one maintenance access road would be required. The required right of way would be 80 feet. Figure 12 shows a typical cross section of this alternative.



ALTERNATIVE NO. 5
CONCRETE LINED CHANNEL
FIGURE 12

Alternative No. 6. Buried Concrete Box Culvert

This alternative would consist of a completely buried underground concrete box culvert. It would perform its function invisibly, requiring no maintenance roads or fences. The required right of way would be a 32-foot-wide easement, and the ground surface over the culvert could be used for other purposes, such as streets, parking, or landscaped medians. Buildings or other fixed structures would not be allowed within the easement. Figure 13 shows a typical cross section of this alternative.



ALTERNATIVE NO. 6
BURIED CONCRETE BOX CULVERT
FIGURE 13

Alternative No. 7. ½ Box Culvert - ½ Earth Channel

This alternative is a combination of Alternative Nos. 6 and 3 on the alignment of Alternative No. 6. The box culvert (No. 6) would be from Stevens Creek Boulevard to just downstream of Vallco Parkway Extension. The earth channel (No. 3) would be from Vallco Parkway Extension to Interstate 280.

Alternative No. 8. ½ Rock-Lined - ½ Earth Channel

This alternative is a combination of Alternatives No. 4 and 3 on the alignment of Alternatives No. 3, 4, and 5. The rock-lined channel (No. 4) would be from Stevens Creek Boulevard to just downstream from Vallco Parkway Extension. The earth channel (No. 3) would be from Vallco Parkway Extension to Interstate 280.

Estimated Costs for Alternatives

A chart of the costs for the various alternatives is shown on Table 2. These costs are separated into four categories: 1) construction, 2) engineering and contingencies, 3) mitigation costs and 4) right of way. The total project cost is the sum of these four categories. Construction costs include all the labor, equipment, and materials needed to build each alternative. A preliminary plan, a list of work and materials, and a construction cost estimate were prepared for each alternative. Unit prices from which the construction cost estimates were computed are taken from unit prices bid for similar District projects during the winter and spring of 1977.

The cost for engineering and contingencies was computed at 35 percent of the construction costs. This category includes the costs for the engineering design (10 percent of the construction cost), construction contract administration, including inspection (15 percent of the construction cost), and overhead contingencies, such as legal fees, printing, clerical, etc. (10 percent of the construction cost).

TABLE 2

COSTS FOR ALTERNATIVES

Alternative No.	Construction	Engineering & Contingencies	Mitigation Cost	Right of Way	Total
1. Preserve the Existing Channel					
A. Stevens Creek Blvd.	160,000	56,000	0	0	216,000
B. Channel	32,000	11,000	30,000	419,000	492,000
C. Total	192,000	67,000	30,000	419,000	708,000
2A. Modify and Stabilize Existing Channel					
A. Stevens Creek Blvd	160,000	56,000	0	0	216,000
B. Channel	220,000	77,000	30,000	198,000	525,000
C. Total	380,000	133,000	30,000	198,000	741,000
2B. Modify and Stabilize Existing Channel					
A. Stevens Creek Blvd.	160,000	56,000	0	0	216,000
B. Channel	150,000	53,000	60,000	264,000	527,000
C. Total	310,000	109,000	60,000	264,000	743,000
3. Earth Channel					
A. Stevens Creek Blvd.	160,000	56,000	0	0	216,000
B. Channel	214,000	75,000	30,000	132,000	451,000
C. Total	374,000	131,000	30,000	132,000	667,000
4. Rock Lined Channel					
A. Stevens Creek Blvd.	160,000	56,000	0	0	216,000
B. Channel	249,000	87,000	60,000	0	396,000
C. Total	409,000	143,000	60,000	0	612,000
5. Concrete Lined Channel					
A. Stevens Creek Blvd.	160,000	56,000	0	0	216,000
B. Channel	300,000	105,000	60,000	0	465,000
C. Total	460,000	161,000	60,000	0	681,000
6. Buried Concrete Box Culvert					
A. Stevens Creek Blvd.	160,000	56,000	0	0	216,000
B. Channel	1,050,000	368,000	60,000	0	1,478,000
C. Total	1,210,000	424,000	60,000	0	1,694,000

TABLE 2 (CONTINUED)

COSTS FOR ALTERNATIVES

Alternative No.	Construction	Engineering & Contingencies	Mitigation Cost	Right of Way	Total
7. ½ Box Culvert - ½ Earth Channel					
A. Stevens Creek Blvd.	160,000	56,000	0	0	216,000
B. Channel	687,000	240,000	30,000	58,000	1,015,000
C. Total	847,000	296,000	30,000	58,000	1,231,000
8. ½ Earth Channel - ½ Rock-Lined					
A. Stevens Creek Blvd.	160,000	56,000	0	0	216,000
B. Channel	235,000	82,000	45,000	58,000	420,000
C. Total	395,000	138,000	45,000	58,000	636,000

For any of the eight alternatives, the District would have acquired some of the right of way by dedication from Vallco Park, Ltd., at no cost to the District. The District has a policy for determining how much right of way should be dedicated. Applying this policy to Calabazas Creek between Stevens Creek Boulevard and Interstate 280, the District would acquire a strip of land up to a maximum width of 115 feet. For alternatives requiring a width of 115 feet or less, the smaller amount would be dedicated. For alternatives requiring a width greater than 115 feet, the District would purchase the additional right of way at a fair market value. The right of way costs shown on Table 2 are for land that the District would have to purchase at an estimated cost of $120,000 per acre. These costs do not include the value of the land that would be dedicated.

Evaluation of Alternatives

Table 3 shows the ranking of alternatives from least expensive to most expensive.

TABLE 3

RANKING OF ALTERNATIVES BY COST

Ranking	Alternative No.	Total Cost
1	4. Rock-Lined Channel	$ 612,000
2	8. ½ Rock-Lined - ½ Earth Channel	636,000
3	3. Earth Channel	667,000
4	5. Concrete-Lined Channel	681,000
5	1. Preserve the Existing Creek	708,000
6	2A. Modify and Stabilize	741,000
7	2B. Modify and Stabilize	743,000
8	7. ½ Box Culvert - ½ Earth Channel	1,231,000
9	6. Buried Concrete Box Culvert	1,694,000

Alternatives No. 4, 5, 2A, and 6 have significant environmental impacts that make these alternatives unacceptable. The least expensive alternative that is environmentally acceptable is Alternative No. 8, the ½ Rock-Lined Channel - ½ Earth Channel. Since all the other environmentally acceptable alternatives are more expensive than Alternative No. 8, then Alternative No. 8 would have been the project recommended by the District had Vallco Park, Ltd., not requested that Alternative No. 7 be considered. Alternative No. 6 is the best project from a strictly land use point of view. However, it is the worst project from an environmental point of view. Alternative No. 7 is less desirable for optimum land use but it reduces the environmental impacts to an acceptable level. Furthermore, Vallco Park, Ltd., is willing to pay the difference in cost between Alternatives No. 7 and 8. Vallco Park, Ltd., is also willing to dedicate land valued at approximately $242,000 and is willing to pay one-half the cost for revegetating the earth channel portion of Alternative No. 7. If Alternative No. 8 was selected, the District would have to bear the full cost of revegetating the earth channel. The District staff concludes that Alternative No. 7 is the best compromise between environmental considerations and land use planning. Therefore, Alternative No. 7 is the "proposed project".

PROPOSED PROJECT

Project Description

The proposed project consists of a double 9-foot x 11-foot reinforced concrete box culvert starting at a point just upstream from Stevens Creek Boulevard and running diagonally across Stevens Creek Boulevard for about 200 feet then continuing north for about 100 feet where the box culvert widens to 12 ft. x 11 ft. and runs north for about 800 feet to a point just downstream from the future Vallco Parkway Extension. From this point a vegetated earth channel, with low-lying maintenance roads, runs north for about 700 feet to a confluence with Junipero Serra Channel just upstream (south) of Interstate 280. Figure 2 on page 10 shows the alignment of the proposed project.

The earth channel will be planted with selected vegetation to establish a riparian habitat. A detailed plan for the riparian habitat will be prepared by District staff. Vallco Park, Ltd., under the direction of the District's environmental and landscaping staffs, and through the consultation of the Department of Fish and Game, will administer a contract for installing the riparian habitat. The riparian habitat and the rest of the proposed project will be maintained by the District. The final channel cross section may vary from that shown in this report to optimize the quality of the riparian habitat. The installation of the riparian features will be undertaken as part of or immediately after the channel construction.

The existing box culvert at Stevens Creek Boulevard is too small to carry the design flows, and it will be completely removed prior to the construction of the new box culvert.

The existing creek running through the lands of Vallco Park, Ltd., will be backfilled with earth excavated from the proposed project and with earth supplied by Vallco Park, Ltd.

Construction Costs

The total cost of the proposed project is estimated to be $1,231,000. See Alternative No. 7 in Table 2 for a summary of construction, engineering and contingencies, mitigation and right of way costs.

Project Financing

It is proposed that the project be financed from two sources. The District could contribute an estimated sum of $616,000 that is available from the Series "C" 1973 Bond Sale for the North Central Flood Control Zone of the District. Vallco Park, Ltd., is willing to provide the balance of the funding.

The District's share was based upon the estimated cost for the least expensive environmentally acceptable alternative (Alternative No. 8) minus approximately $20,000 to be contributed by Vallco Park, Ltd., toward the cost of establishing a riparian habitat in the earth channel.

TABLE 4

SOURCES OF FINANCING - SUMMARY

Santa Clara Valley Water District	$ 616,000
Vallco Park, Ltd.	615,000
Total Project Cost	$1,231,000

Project Schedule and Staging

It is proposed that the project be constructed in two contracts. The first contract is to be for the work within the Vallco property and will be handled by Vallco Park, Ltd.

The second contract is to be for the construction of the Stevens Creek Boulevard culvert and will be handled by the Water District.

The earth channel and box culvert construction within the lands of Vallco Park, Ltd., is scheduled to be started by the fall of 1977. The box culvert construction of Stevens Creek Boulevard is scheduled to be started in the spring of 1978.

All of the work proposed in this report is scheduled to be completed by the winter of 1977-78.

CONCLUSIONS AND RECOMMENDATIONS

The District staff concludes that:

1. Calabazas Creek from Stevens Creek Boulevard to Interstate 280 is subject to flooding and erosion problems.

2. Flooding is caused by an undersized box culvert at Stevens Creek Boulevard.

3. Erosion is caused by a combination of steep channel bottom slopes and existing soil conditions.

4. Eight alternative plans were studied in detail. All eight alternatives offer solutions to the flooding and erosion problems.

5. Alternative No. 4, the rock-lined channel, was shown in the draft Engineer's Report and fraft Environmental Impact Repoer to be the "District Alternative" because it was the lease expensive. The cost of this alternative was to be the basis for the District's financial contribution toward the project. Alternative No. 4 was found to be environmentally unacceptable; therefore, the District modified its alternative. The District's alternative has become Alternative No. 8, the ½ Rock-Lined Channel-½ Earth Channel. This alternative is the least expensive plan that is also environmentally acceptable.

6. The owners of the adjacent property, Vallco Park, Ltd., desire Alternative No. 6, the box culvert, but they are willing to accept Alternative No. 7, the ½ Box Culvert-½ Earth Channel, because Alternative No. 7 greatly reduces the environmental impacts of Alternative No. 6. Vallco Park, Ltd., is willing to pay the difference in cost between Alternative No. 7 and

Alternative No. 8 plus pay one-half the cost of establishing a riparian habitat in the earth channel portion of Alternative No. 7.

7. Alternative No. 7 is an acceptable alternative to Alternative No. 8 for several reasons.

a. Alternative No. 7 would result in a direct estimated savings to the District of $20,000 over Alternative No. 8.

b. Alternative No. 7 would result in an indirect savings to the District because it would be easier to maintain.

c. Alternative No. 7 best serves the land use planning for the area.

d. Both Alternative No. 7 and No. 8 achieve the same goal; to provide flood and erosion protection.

8. A summary of the financing of the work proposed in this report is:

a. The total project cost for Alternative No. 7 is $1,231,000. The District's share is $616,000 and Vallco Park, Ltd., is $615,000.

b. The District's share would be spent as follows:

$400,000	toward construction of Alternative No. 7 within the lands of Vallco Park, Ltd. The work would be done by Vallco Park, Ltd.
$216,000	for replacing the box culvert at Stevens Creek Boulevard. The work would be done by the District.

c. The total project cost for Alternative No. 8 would have been $636,000.

It is recommended that this report be approved and that the construction of Alternative No. 7 be undertaken.

Prepared by:

Michael Freitas

Michael Freitas
Project Engineer
Design Division

Submitted by:

Bruce Wilson

Bruce Wilson
Division Engineer
Design Division

APPROVAL RECOMMENDED:

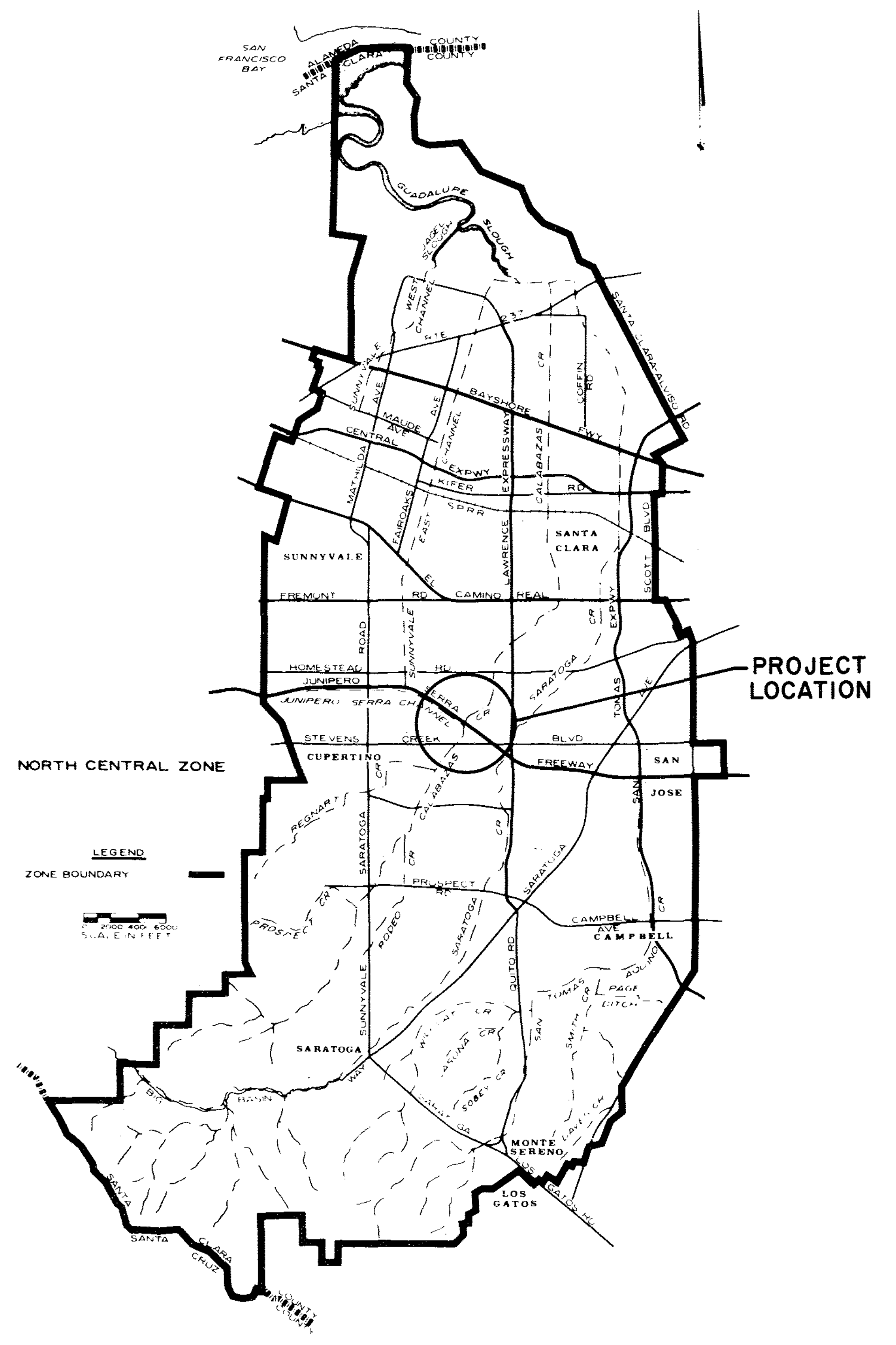
Edwin Ferguson

Edwin Ferguson
Head, Design Branch
Design and Construction

APPROVED:

Edwin Ferguson

for George Korbay
Design and Construction Manager



MAP AND GENERAL PLAN

FOR

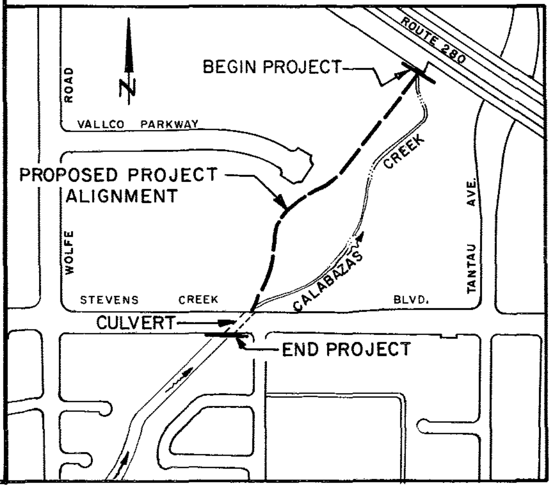
CALABAZAS CREEK

FROM

JUNIPERO SERRA FREEWAY, INTERSTATE 280
TO
STEVENS CREEK BLVD.

Santa Clara Valley Water District

NORTH CENTRAL FLOOD CONTROL ZONE **PROJECT NO. 2010**



SITE MAP

INDEX

SHEET NO.	DESCRIPTION
1	COVER SHEET & SITE MAP
2, 3	GENERAL PLAN
4	PROFILE

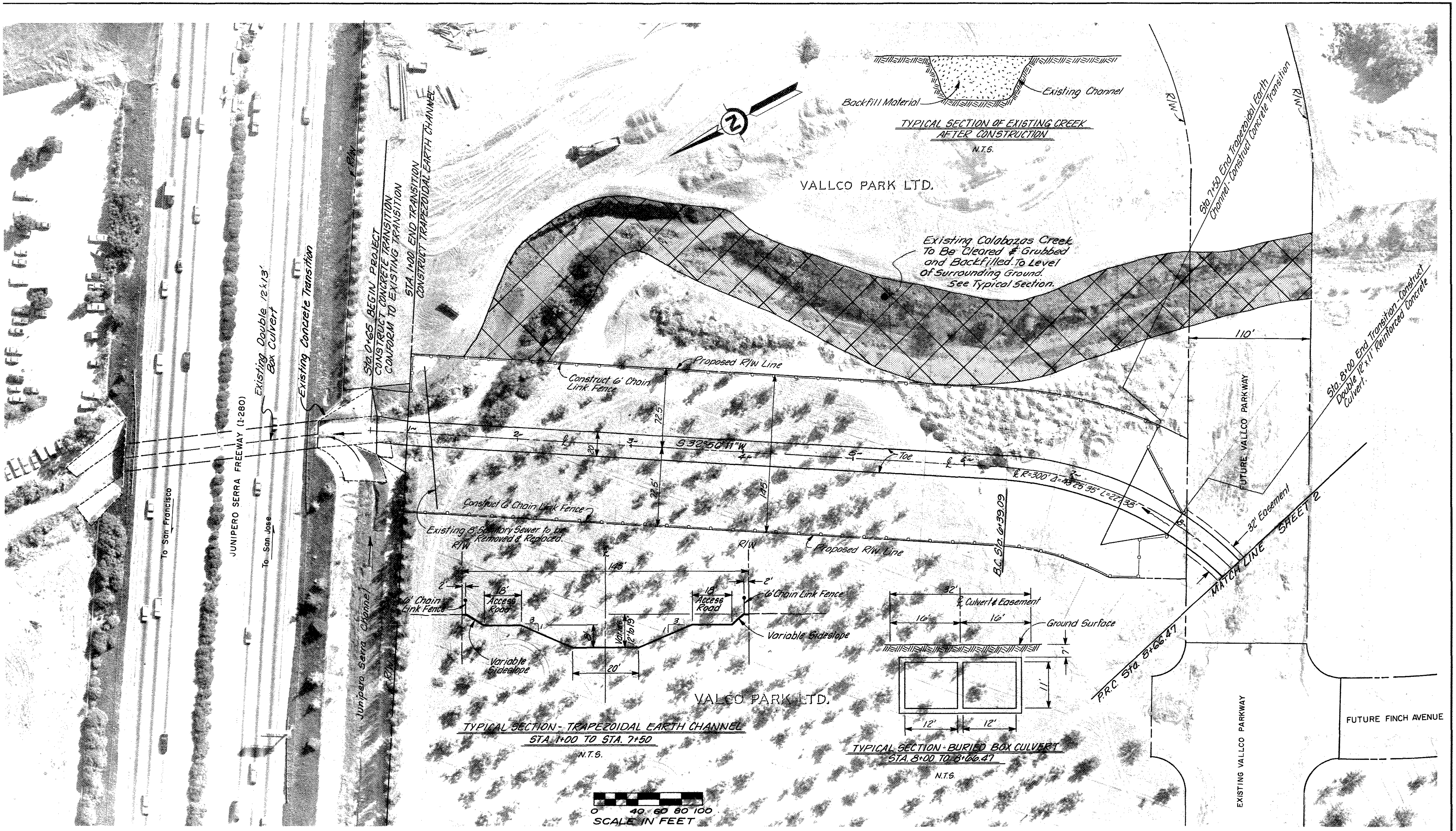
REDUCED PLAN
USE SCALE BELOW
0 1 2 3
3 INCHES ON ORIGINAL PLAN

PROJECT APPROVAL:

Edwin Ferguson
DESIGN AND CONSTRUCTION MANAGER

Lloyd C Fowler
CHIEF ENGINEER

DATE: 17 Aug '77


Backfill Material
Existing Channel
TYPICAL SECTION OF EXISTING CREEK AFTER CONSTRUCTION
N.T.S.
N
VALLCO PARK LTD.
Existing Calabazas Creek To Be Cleared & Grubbed and Backfilled To Level of Surrounding Ground. See Typical Section.
Sta. 7+50 End Trapezoidal Earth Channel - Construct Concrete Transition
R/W
R/W
110'
Sta. 8+00 End Transition - Construct Double 12'x11' Reinforced Concrete Culvert.
Existing Double 12'x13' Box Culvert
Existing Concrete Transition
Sta. 0+65 BEGIN PROJECT CONSTRUCT CONCRETE TRANSITION CONFORM TO EXISTING TRANSITION
STA. 1+00 END TRANSITION CONSTRUCT TRAPEZOIDAL EARTH CHANNEL
R/W
Proposed R/W Line
Construct 6' Chain Link Fence
72.5
20
S 32°50'11"W
22.5'
145'
1~
2~
3~
4~
5~
6~
7~
8~
Toe
℄ R=300' Δ=43°25'35" L=227.38'
FUTURE VALLCO PARKWAY
32' Easement
MATCH LINE SHEET 2
Construct 6' Chain Link Fence
Existing 8" Sanitary Sewer to be Removed & Replaced.
Proposed R/W Line
B.C. Sta. 6+39.09
JUNIPERO SERRA FREEWAY (I-280)
To San Francisco
To San Jose
Junipero Serra Channel
R/W
R/W
R/W
145'
2'
2'
18'
18'
Access Road
Access Road
6' Chain Link Fence
6' Chain Link Fence
3
1
1
3
Varies 2' to 19'
Variable Sideslope
Variable Sideslope
20'
VALLCO PARK LTD.
TYPICAL SECTION - TRAPEZOIDAL EARTH CHANNEL STA. 1+00 TO STA. 7+50
N.T.S.
32'
℄ Culvert & Easement
16'
16'
Ground Surface
7'
11'
12'
12'
TYPICAL SECTION - BURIED BOX CULVERT STA. 8+00 TO 8+66.47
N.T.S.
P.R.C. Sta. 8+66.47
EXISTING VALLCO PARKWAY
FUTURE FINCH AVENUE
0 40 60 80 100
SCALE IN FEET

REFER TO TRACING FOR LATEST REVISION		
DESCRIPTION	SUB.	APPR

REFERENCE INFORMATION AND NOTES

1 DATE OF PHOTOGRAPHY 11-2-76

1. All Existing Orchard Trees Within Proposed Easement To Be Removed.

REDUCED PLAN
USE SCALE BELOW
0 1 2 3
3 INCHES ON ORIGINAL PLAN

DATE	8-16-77
DESIGN	D. Von Rueden
DRAWN	m.v.
CHECKED	MJF ✓

Santa Clara Valley Water District

ENGINEERING CERTIFICATION
Michael Freitas
PROJECT ENGINEER R.C.E. NO. 23345
Bruce Wilson
DIVISION ENGINEER R.C.E. NO. 15851

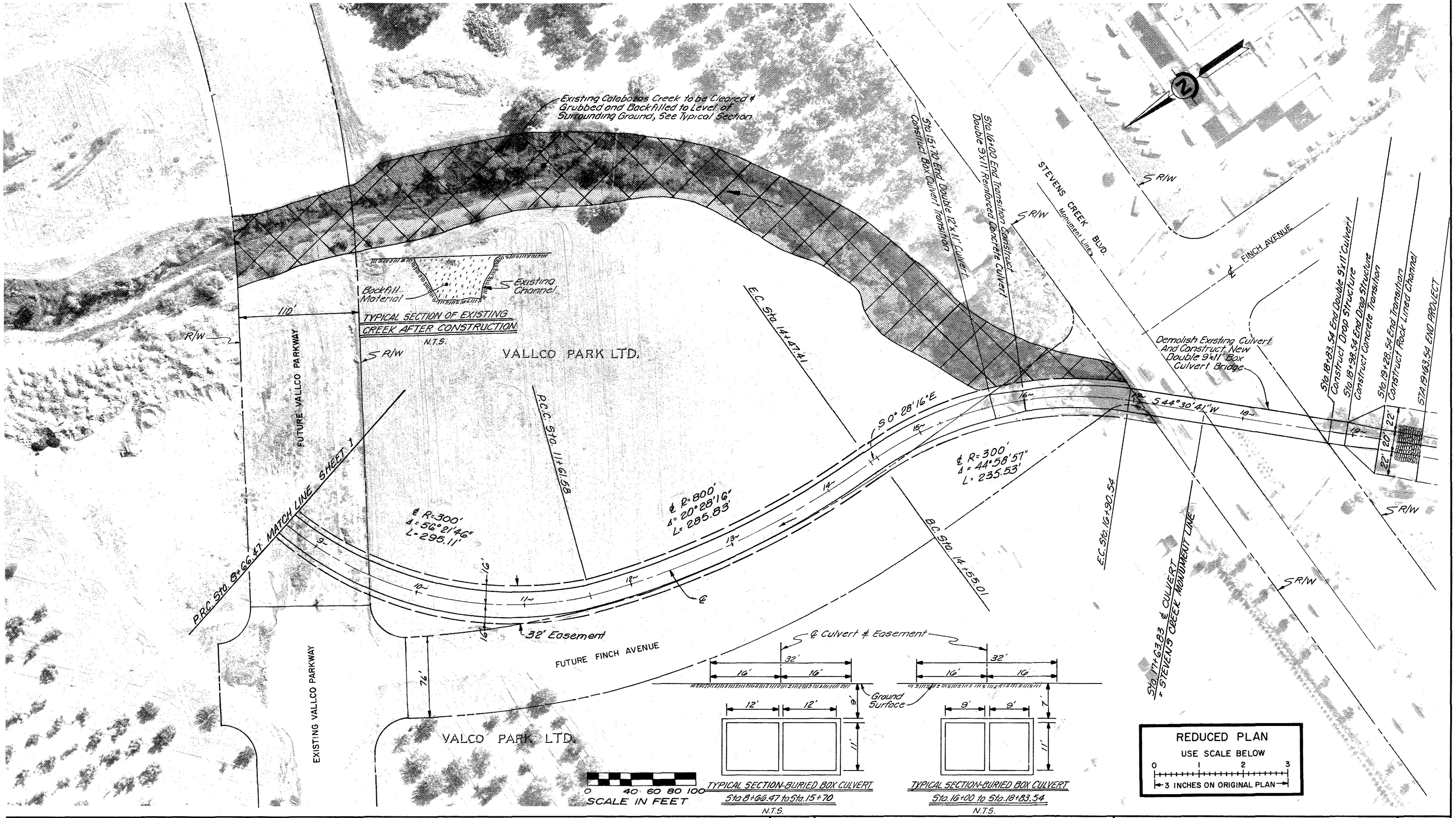
ENGINEERING APPROVAL
Edwin Ferguson
HEAD, DESIGN BRANCH R.C.E. NO. 14455

ZONE NC-1

CALABAZAS CREEK GENERAL PLAN

SCALE As Shown

SHEET 2 of 4


Existing Calabazas Creek to be Cleared & Grubbed and Backfilled to Level of Surrounding Ground, See Typical Section
Backfill Material
Existing Channel
TYPICAL SECTION OF EXISTING CREEK AFTER CONSTRUCTION
N.T.S.
110'
R/W
FUTURE VALLCO PARKWAY
VALLCO PARK LTD.
P.R.C. Sta. 8+66.47 MATCH LINE SHEET 1
P.C.C. Sta. 11+61.58
E.C. Sta. 14+47.41
B.C. Sta. 14+55.01
E.C. Sta. 16+90.54
℄ R=300' Δ=56°21'46" L=295.11'
℄ R=800' Δ=20°28'16" L=285.83'
℄ R=300' Δ=44°58'57" L=235.53'
S 0° 28' 16" E
S 44°30'41" W
16'
32' Easement
℄
FUTURE FINCH AVENUE
76'
EXISTING VALLCO PARKWAY
VALCO PARK LTD.
Sta. 15+70 End Double 12'x11' Culvert Construct Box Culvert Transition
Sta. 16+00 End Transition Construct Double 9'x11' Reinforced Concrete Culvert
STEVENS CREEK BLVD.
Monument Line
℄ FINCH AVENUE
Demolish Existing Culvert And Construct New Double 9'x11' Box Culvert Bridge
Sta. 18+83.54 End Double 9'x11' Culvert Construct Drop Structure
Sta. 18+98.54 End Drop Structure Construct Concrete Transition
Sta. 19+28.54 End Transition Construct Rock Lined Channel
STA. 19+63.54 END PROJECT
22' 20' 22'
Sta. 17+63.83 ℄ CULVERT = STEVENS CREEK MONUMENT LINE
℄ Culvert & Easement
32'
16' 16'
Ground Surface
12' 12'
9'
11'
TYPICAL SECTION-BURIED BOX CULVERT
Sta 8+66.47 to Sta. 15+70
N.T.S.
9' 9'
7'
TYPICAL SECTION-BURIED BOX CULVERT
Sta. 16+00 to Sta. 18+83.54
N.T.S.
0 40 60 80 100
SCALE IN FEET
REDUCED PLAN
USE SCALE BELOW
0 1 2 3
3 INCHES ON ORIGINAL PLAN
N

REFER TO TRACING FOR LATEST REVISION

DESCRIPTION	SUB.	APPR.

REFERENCE INFORMATION AND NOTES

1. DATE OF PHOTOGRAPHY 11-2-76
2. Existing telephone, water, gas, storm sewer and sanitary sewer facilities at Stevens Creek Blvd. will be relocated as required by construction of the new culvert between Sta. 16+90 and Sta. 18+70.

DATE 8-16-77
DESIGN D. Von Rueden
DRAWN G. Mithlo
CHECKED MJF

Santa Clara Valley Water District

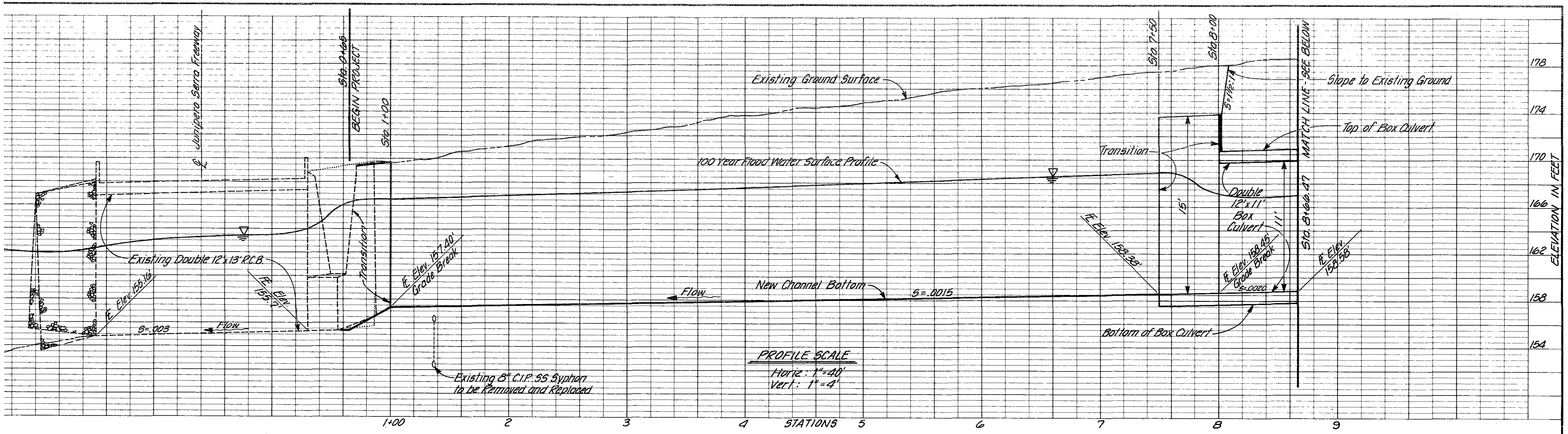
ENGINEERING CERTIFICATION
Michael Freitas
PROJECT ENGINEER R.C.E. NO. 23345
Bruce Wilson
DIVISION ENGINEER R.C.E. NO. 1585

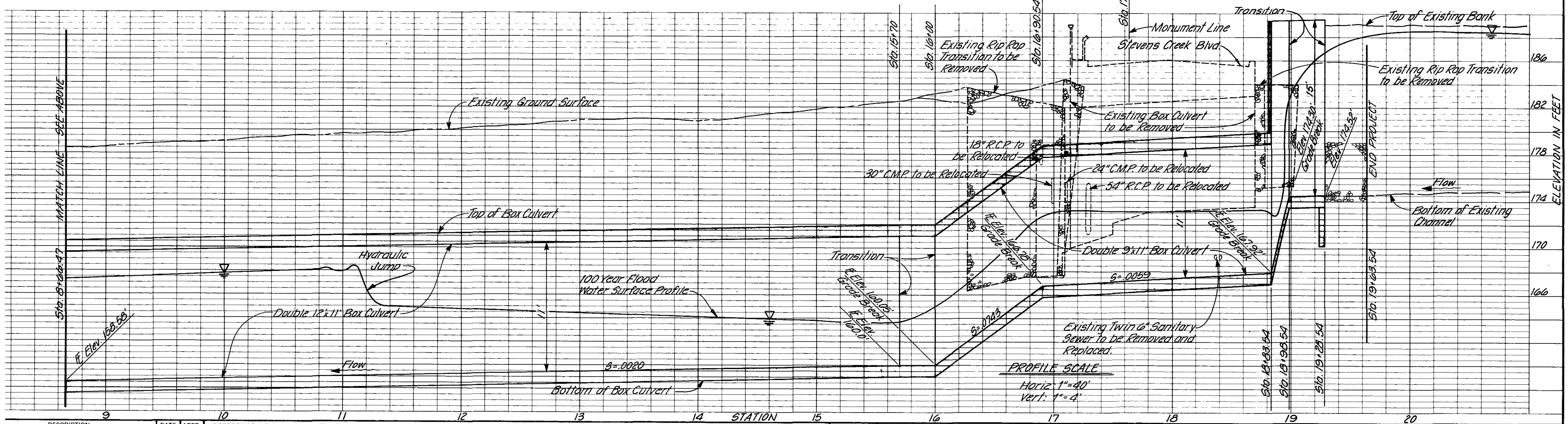
ENGINEERING APPROVAL
Edwin Ferguson
HEAD, DESIGN BRANCH R.C.E. NO. 14455

ZONE NC-1

CALABAZAS CREEK GENERAL PLAN

SCALE As Shown
SHEET 3 of 4




MATCH LINE - SEE ABOVE
Sta. 8+66.47
F.L. Elev. 158.58'
Existing Ground Surface
Top of Box Culvert
Hydraulic Jump
100 Year Flood Water Surface Profile
Double 12'x11' Box Culvert
11'
Flow
S=.0020
Bottom of Box Culvert
Transition
F.L. Elev. 160.05' Grade Break
F.L. Elev. 160.0'
S=.0743
Sta. 15+70
Sta. 16+00
Sta. 16+90.54
Sta. 17+63.83
Existing Rip Rap Transition to be Removed
Monument Line
Stevens Creek Blvd.
Existing Box Culvert to be Removed
18" R.C.P. to be Relocated
30" C.M.P. to be Relocated
24" C.M.P. to be Relocated
54" R.C.P. to be Relocated
F.L. Elev. 166.76' Grade Break
F.L. Elev. 167.92' Grade Break
Double 9'x11' Box Culvert
S=.0059
Existing Twin 6" Sanitary Sewer to be Removed and Replaced.
PROFILE SCALE
Horiz: 1"=40'
Vert: 1"=4'
Transition
Top of Existing Bank
Existing Rip Rap Transition to be Removed
15'
Elev. 174.30' Grade Break
Elev. 174.52'
END PROJECT
Flow
Bottom of Existing Channel
Sta. 18+83.54
Sta. 18+98.54
Sta. 19+28.54
Sta. 19+63.54
186
182
178
174
170
166
ELEVATION IN FEET
9
10
11
12
13
14
STATION
15
16
17
18
19
20

DESCRIPTION	DATE	APPR.
REDUCED PLAN USE SCALE BELOW 1 2 3 3 INCHES ON ORIGINAL PLAN→		

REFERENCE INFORMATION AND NOTES

1. Basis of Elevation : Cut "X" Top of Curb @ Driveway Near Northeast Corner of Existing Stevens Creek Boulevard Bridge Railing - Elevation 185.42'

PHOTOGRAPHY BY:

DATE

RECTIFICATION BY:

DATE
8-16-77

DESIGN
D.Von Rueden

DRAWN
R. Bellum

CHECKED
M. Freitas

Santa Clara Valley Water District

ENGINEERING CERTIFICATION
Michael Freitas
PROJECT ENGINEER
Bruce Wilson
DIVISION ENGINEER R.C.E. NO. 15851

ENGINEERING APPROVAL
Edwin Ferguson
HEAD, DESIGN BRANCH R.C.E. NO. 14455

CALABAZAS CREEK
PROFILE

SCALE
As Shown

SHEET
4
of 4

SANTA CLARA VALLEY WATER DISTRICT

FINAL ENVIRONMENTAL IMPACT REPORT
PROPOSED FLOOD AND EROSION CONTROL MEASURES FOR CALABAZAS CREEK

(Stevens Creek Boulevard to Interstate 280)

NORTH CENTRAL ZONE

PROJECT NO. 2010

September 1977

Prepared by
Design and Construction Unit Staff

Dr. Bernard H. Goldner	Environmental Specialist
Winthrop A. Stiles	Assistant Environmental Specialist
John L. Richardson	Head, Project Development Branch

George Korbay
Design and Construction Manager

John T. O'Halloran General Manager	Lloyd C. Fowler Chief Engineer

DISTRICT BOARD OF DIRECTORS

Joe Chiri	District 1	James J. Lenihan	District 5
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ADDENDUM

FINAL ENVIRONMENTAL IMPACT REPORT

INTRODUCTION TO ADDENDUM

As explained in the accompanying Engineer's Report, the many comments received by the District on the project assessed in the Draft Environmental Impact Report (DEIR) have resulted in a new proposed project, now designated as Alternative No. 7, 1/2 Box Culvert - 1/2 Earth Channel.

Because several of the impacts of the new project differ substantially from those of the original project, the DEIR has been amended to reflect these changes.

This Addendum contains two parts: The first section amends various sections of the DEIR with supplemental discussion and material appropriate to the new proposed project. The second section consists of the District's response to the written comments received on the DEIR during the public review period.

The Addendum, combined with the DEIR, constitutes the Final EIR.

SUMMARY

A summary of the findings of the Final Environmental Impact Report has been included in the Summary of the accompanying Engineer's Report to avoid duplication of effort.

1. PROJECT DESCRIPTION (page 1)*

The proposed project evaluated in this Environmental Impact Report consists of:

1. Installation of a 900-foot underground double-cell concrete box culvert to replace the existing reach of Calabazas Creek between Stevens Creek Boulevard and the future Vallco Parkway extension;

2. Construction of a 750-foot trapezoidal earth channel with depressed access roads from the Vallco Parkway extension to Interstate 280;

3. Construction of an enlarged culvert underneath Stevens Creek Boulevard; and

4. Filling of Calabazas Creek between Stevens Creek Boulevard and Interstate 280 to ground level.

The objectives, location, alignment, detailed description, and graphic description of the proposed project and of the alternatives to this project are presented in the accompanying Engineer's Report. The new project is designated as Alternative No. 7.

2. PHYSICAL CONSIDERATIONS

A. GEOLOGIC (page 3)*

2. Geologic Impacts: The impacts on geology and soils in the project area discussed in the DEIR are essentially the

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*Page numbers refer to Draft EIR

same for the new proposed project since the existing creek will still be backfilled. The excavated earth channel section will provide stable side slopes which will eliminate the existing condition of severe erosion and bank failure.

B. HYDROLOGIC (pages 4-7)*

1. Existing Hydrologic Conditions: A limited exploration study to determine infiltration capacity of Calabazas Creek in the subject reach was conducted by the District during the DEIR review period. Three soil borings were made along the creek bed. Additionally, soil borings previously made along the proposed box culvert alignment were reviewed, and the geological features of the stream bed surveyed. The study concluded that the upstream one-third of the channel provides essentially no beneficial groundwater recharge while the downstream two-thirds does have the potential to recharge the groundwater basin. The original estimate of a potential recharge rate of 0.5 to one acre-foot per day along this reach appears to be valid. Details of the investigation are given in Attachment A (Memo from Thomas I. Iwamura to Bruce Wilson, April 21, 1977).

2. Hydrologic Impacts: The proposed project will retain the groundwater recharge potential of this reach of the creek since the downstream section of the project will be an excavated earth channel. Placing the upstream portion of the reach in a concrete box culvert will have only a slight impact on recharge.

3. Unavoidable Adverse Hydrological Impacts: None.

4. Mitigation of Hydrologic Impacts: None required.

5. Irreversible Hydrologic Impacts: None.

C. VISUAL AND AESTHETIC (page 8)*

4. Mitigation of Visual and Aesthetic Impacts: A landscaped off-site groundwater recharge area is no longer required as mitigation to the proposed project. Landscaping the earth channel to establish a riparian habitat will eventually result in an aesthetic asset to the surrounding urban area. It must be emphasized, however, that creek restoration is still a young science, and there is no certainty that the landscaping plan will attain its objectives. In contrast with the steep, bare banks of a large portion of the existing creek, the reconstructed channel will have relatively flat, stable side slopes (3:1) which will support vegetation. The new landscaped channel will be maintained by the District; trash and debris will not be allowed to accumulate in the creek.

3. ECOLOGICAL CONSIDERATIONS

A. FLORA (pages 14-15)*

2. Flora Impacts: The large coast live oak near Stevens Creek Boulevard will be preserved and protected by installation of a perforated feeder pipe from the box culvert so that water can continue to reach the roots. The proposed channel will follow the same off-stream alignment as the previous project although the larger right of way required for the earth channel section will remove a greater number of orchard trees (destined for eventual removal).

4. Mitigation of Flora Impacts: Habitat restoration of the earth channel will partially mitigate the loss of the existing creek although it will take some years before the successional level of the restored channel reaches the level of the existing riparian plant community. The Department of Fish and Game will be consulted on the landscaping plan prior to implementation.

Native plants will be selected to provide the cover and food sources necessary to develop a diverse riparian plant community. The earth channel has been designed with sufficient capacity so that a reasonable amount of vegetation can be established without compromising its flood control function.

5. Irreversible Flora Impacts: Successful restoration of the earth channel will, in time, replace the riparian vegetation destroyed by the project.

B. FAUNA (pages 16 and 19)*

2. Fauna Impacts: The 1,100-foot underground box culvert section will probably obstruct the free migration of small mammals from one end of this reach of the creek to the other. It is difficult to predict with certainty whether a raccoon, for example, would venture into a dark tunnel of this length in order to relocate along the creek. The contiguous upstream and downstream reaches of the creek presently do not support large populations of mammalian wildlife so that interruption of the corridor is not as serious an impact as it would be for some other creeks.

4. Mitigation of Fauna Impacts: As vegetation within the channel matures, wildlife will be increasingly attracted to the restored habitat. The ultimate wildlife carrying capacity of this reach of the creek will depend to a large degree upon the success of the restoration effort.

5. Irreversible Fauna Impacts: Restoration of the earth channel has the potential to partially reverse the impact on wildlife resulting from filling the existing reach of Calabazas Creek. The existing corridor will probably be irreversibly interrupted by the buried box culvert section.

4. SOCIO-ECONOMIC CONSIDERATIONS

A. LAND USE (page 21)*

2. Land Use Impacts: Placing the creek in a realigned underground box culvert from Stevens Creek Boulevard to the future Vallco Parkway extension will allow Vallco Park to make maximum use of the narrow triangular area between the creek and Stevens Creek Boulevard. Because the downstream portion of the proposed project will be an earth channel, it will be necessary for Vallco Park to plan future development around the open channel. Since the alignment of the proposed project is that selected by Vallco Park, it is assumed that the usable space resulting from the project is to Vallco Park's maximum benefit in terms of usable space.

B. COMMUNITY PLANS AND GOALS (page 24)*

3. Unavoidable Adverse Community Impacts: Conflict and inconsistency with the Conservation of Resources Element of the County's General Plan and policies of the Department of Fish and Game regarding the destruction of riparian habitat will be partially mitigated by the new proposed project compared to the original project. It should be noted that the City of Cupertino's City Council approved placing the entire reach in a box culvert on April 18, 1977 after reviewing the Draft Engineer's Report and DEIR. This action indicates a conflict between local land use planning entities and jurisdictions having regional environmental concerns.

C. ECONOMIC (Pages 26 and 27)*

2. Economic Impacts: Compared to the original buried box culvert project, the new project, because of the open earth

channel section, will yield less usable land for future development, which could result in less economic benefit for Vallco Park than the previous project.

The District will be required to expend funds over the long-term to maintain the vegetation in the restored earth channel section; erosion and sedimentation are not expected to be significant problems.

3. Unavoidable Adverse Economic Impacts: The proposed project is more expensive than all but one alternative, the previously proposed buried box culvert. It is estimated that the total cost will amount to $1,231,000. (See Table 2 of the Engineer's Report for comparative cost estimates for the other alternatives.)

4. Mitigation of Economic Impacts: By agreement, the District and Vallco Park will share the cost for the project approximately equally. Project financing is discussed in the Engineer's Report.

D. RECREATION (pages 28 and 29)*

2. Unavoidable Adverse Recreation Impacts: The landscaped earth channel has the potential to provide a passive recreational amenity for visitors and employees at Vallco Park, depending upon the manner in which future development is planned. For example, it may be possible to provide tables or benches near the creek for workers to enjoy a view of the creek while eating lunch. Although the creek may be fenced, the flatter, stable side slopes of the restored earth channel will be much less hazardous than the existing creek. It would be possible to remove the fence at some later time if this is the desire of Vallco Park.

4. Mitigation of Recreation Impacts: Integration of the restored earth channel into Vallco Park for passive recreation would more than mitigate the impact of backfilling the existing creek, since the creek does not serve recreational needs presently.

6. ALTERNATIVES TO THE PROPOSED PROJECT (pages 32-37) *

H. ALTERNATIVE NO. 8 - 1/2 ROCK-LINED CHANNEL - 1/2 EARTH CHANNEL

This alternative would follow the same alignment as Alternatives 3, 4, and 5. The impacts are essentially the same as described for Alternatives No. 3 and 4. This design would maintain a vegetated wildlife corridor throughout the reach but the larger amount of right of way required would restrict future development of Vallco Park much more than the proposed project in the upstream portion of the project area.

An explanation as to why the alternatives to the project were rejected in favor of the proposed project is found on pages 37 and 38 of the Engineer's Report.

ATTACHMENT A

MEMORANDUM

TO: Bruce Wilson FROM: Thomas I. Iwamura

SUBJECT: Exploration for Percolation Evaluation of Calabazas Creek at Vallco Park

DATE: April 21, 1977

Introduction

This memorandum reports my findings in regard to stream bed infiltration capacity along Calabazas Creek through Vallco Park (between Highway 280 and Stevens Creek Boulevard) as based upon a limited exploration program. The study area along Calabazas Creek occurs within the City of Cupertino (refer to Index Map of the attached Plate).

Exploration consisted of the following:

1. The drilling of four 6-inch-diameter auger holes along the west bank of the stream on April 11, 1977. Three of the holes were drilled to a depth of 55 feet and one was to 50 feet.

2. Review of previous exploration drilling performed along the proposed box culvert alignment by Peter Kaldveer and Associates, March 1977. The proposed alignment lies just west of the stream channel and ties into the existing box culverts and channel at Stevens Creek Boulevard and at Highway 280.

3. A cursory reconnaissance of the stream bed and banks of Calabazas Creek within the study area.

Earlier related memorandum of the project area includes:

1. Iwamura to B. Wilson, March 29, 1977, "Methods to determine percolation capacity, Calabazas Creek at Vallco Park". Attached to this memorandum was a plotting of stream gaging percolation checks along the various reaches of the stream

during various time intervals. This memorandum also discusses some of my preliminary thoughts on percolation capacity along the project area.

2. Iwamura to J. Clarke, February 2, 1977, "Exploration of Calabazas Creek Percolation Pond Site". In addition to discussing the geologic conditions of a specific upstream percolation pond site, this memorandum also discusses regional geology of the area and the Calabazas alluvial fan.

General Geologic Setting of the Site

The study area occurs about at midfan (longitudinally) on the Calabazas Creek alluvial fan. The general surficial topography is nearly flat with a gentle slope to the northeast. The land surface elevation at Stevens Creek Boulevard is about 185 feet and at Highway 280 is about 170 feet. The stream has incised a meandering channel on the fan surface to a depth of about 15 feet. The channel width at the bottom is about 15 feet and the banks are very steep to nearly vertical.

The entrenchment of stream channel in the upper and midfan areas of the alluvial plain is characteristic of streams along the west side of the valley. This has resulted as the flows of these streams have decreased in most recent geologic times. About 10,000 years ago, when climatic conditions were wetter, the flows in the streams were much greater, carrying larger sediment loads which were discharged into the valley, leading to the accumulation of alluvial fan materials which eventually coalesced laterally with fan materials from adjacent streams.

Finer-grained materials were deposited further downstream and into the San Francisco Bay as basin deposits and shallow marine deposits. As climatic conditions gradually become drier to what they are today, streamflows lessened and the amount of sediments discharge was greatly reduced. With reduction of sediment discharge, the streamflow gradually started to entrench a channel in the upper and midportion of the fan into the previously deposited fan materials to its present general configuration.

The geologic section exposed in the entrenched channel banks consists of nearly flat-lying beds of clay or silty clay with thin interbeds of sand and gravel. The bottom of the entrenched stream has cut into a deposit of clayey gravel in the downstream two-thirds of the study reach and into a clay bed in the upstream one-third of the reach. A thin blanket of loose (migrating) stream channel sand and gravel occurs along much of the reach. It is estimated that the clayey gravel portion of the channel does have the potential to provide beneficial recharge to the groundwater system.

The channel reach within the study area lies within the "forebay zone" of the Santa Clara Valley groundwater basin. The forebay zone which fringes the lateral edges of the basin to the foothills is an unconfined area (water table condition) which can, through subsurface flow, recharge both the upper unconfined and lower confined zones within the interior portion of the basin. This forebay zone along Calabazas Creek extends from the Santa Cruz Mountain foothills to approximately

Pruneridge Avenue (indefinite boundary). The depth to the groundwater table beneath the study area as measured in water wells is about 180 feet (September 1976).

Findings of the Exploration Program

As the exploration holes were drilled along the edge of the stream bank of Calabazas Creek, they confirmed the clayey fine-grained deposits to depths as exposed in the stream bank section (refer to attached Plate for hole location and cross section). Clayey gravel deposits exposed in portions along the channel bottom were also confirmed.

The exploration drill holes, in extending the interpretive section to depths of 40 feet beneath the bottom of the channel, indicated massive clayey gravel deposits beneath the downstream one-half of the study reach with thin (about 5 feet thick) interbeds or lenses of sandy clay or gravelly, sandy clay. The upstream one-half of the stream is underlain by sandy clay or silty clay extending from just beneath the channel level or at channel level with an occasional gravel layer as indicated by holes CB-2 and EB-4. Hole CB-1, which is located between CB-2 and EB-4, indicates a dissimilar section of interbedded clayey gravel, clay and sandy, gravelly clay. This type of variability can often be expected in alluvial fan materials as stream channels in geologic times have shifted their positions during the fan building process.

I estimate that the clayey gravel is moderately permeable and a free draining material, while the clay, sandy clay, gravelly, sandy clay is low in permeability and have a restrictive drainage character. Beneficial groundwater recharge can occur along the channel where the permeable clayey gravel deposits occur. The infiltrating downward movement of recharging water through the soil section may be temporarily interrupted or become perched on restrictively draining lenses and interbeds. As a saturated zone develops upon the restrictive lense or interbed, movement of water would spread laterally and eventually spill off the lense or interbed and migrate downward. The recharging water may take quite a circuitous path on its journey to the underlying water table. The interpretative movement of infiltrating waters within the upper 40 feet of the section beneath the stream channel is indicated by the arrows sketched on the cross section.

Along the upstream one-third of the channel where clay is exposed in the bottom channel section which extends to depths beneath the channel, I estimate hardly any beneficial recharge occurs. This restrictive drainage within this upper one-third of the reach, along with outfall irrigation drainage water discharged at Stevens Creek Boulevard, accounts for the greater undergrowth in this reach of the channel bottom as compared to the lower reach.

Interpretation

As based upon the geologic section constructed from exploration drill hole data, I interpret that the upstream one-third of the channel would provide essentially no beneficial recharge except possibly at hole CB-1 and the downstream two-thirds reach of the channel would have the potential to provide beneficial recharge to the groundwater basin (again refer to cross section).

On page 5 of the "Draft Environmental Impact Report, Proposed Flood and Erosion Control Measures for Calabazas Creek", February 1977, District Operations and Maintenance personnel have indicated a recharge rate estimated from 0.5 to 1 acre-foot per day along the study reach of the channel when there is flow in the channel. This estimate appears to be consistent with the geologic conditions along and beneath the channel and is further corroborated by interpolating percolation check data (interval streamflow gaging on interim bases). The estimated infiltration rate can be interpreted as a loss of about one second-foot of flow for this short reach represented by the study area under conditions of low flow (less than about 10 second-feet). Under higher flows, the infiltration rate for the study reach may increase by a small amount only as the clayey gravel bed in the channel bottom is overlain by clay deposits which form much of the stream bank.

If further substantiation of the estimated infiltration rate under natural flow conditions along the study reach of the stream is required, accurate stream gaging of inflow and outflow would have to be performed (refer to memorandum Iwamura to B. Wilson, March 29, 1977). Obtaining accuracy for such an estimated small flow loss would be exceedingly difficult. Hence, I would not recommend any further studies regarding percolation rates. The total annual volume difference from the estimated figure to one even grossly out of line would still be relatively small and the difference may not exceed 100 acre-feet per year. This volume difference is assuming 100 days of flow per year through this reach of the stream.

I have already discussed possible mitigating measures with you in the memorandum from Iwamura to J. Clarke of February 2, 1977.

Thomas I. Iwamura
Engineering Geologist
Resources Management Division

Attachment

cc: M. Freitas
D. Kriege
B. Goldner
T. Iwamura

TII:kj

COMMENTS AND RESPONSES
TO
DRAFT ENGINEER'S REPORT
AND
DRAFT ENVIRONMENTAL IMPACT REPORT

RESPONSE TO COMMENTS RECEIVED ON THE DRAFT ENGINEER'S REPORT AND DRAFT ENVIRONMENTAL IMPACT REPORT

A 30-day public review period began February 22, 1977 which was then extended another 45 days to allow the State Clearinghouse to review the documents. A Public Hearing before the District Board of Directors was held in Cupertino on March 23.

Comments received in writing during the review period and oral testimony given at the Public Hearing emphasized several major issues regarding the impacts of the proposed undergrounding of the creek in a box culvert. The nature of the comments, as might be expected, depended upon whether one supported or opposed the project.

Comments supporting the project included those from Mr. Walter Ward, General Manager of Vallco Park; Mr. Will W. Lester, Principal of Vallco Park, Ltd.; Mr. Burrel Leonard, Principal of Vallco Park, Ltd.; Mr. Peter L. Townsend, Counsel for Vallco Park, Ltd.; Mr. Bill Kishimoto, an employee of Vallco Park; and Mrs. Catherine M. Fiedler, a homeowner downstream of the subject reach of Calabazas Creek.

The major issues raised by the supporters of the project are:

1. The creek is an "eyesore", hazardous due to the steep side slopes, encourages trespassers, and creates many social and economic problems for the surrounding property owners.

2. The creek no longer supports a viable wildlife community. The few wildlife species that do exist in the creek are subject poisoning, shooting, and attacks by dogs. It is "inhumane" to allow such wildlife to remain in an urban setting. Furthermore, the Vallco Park landscaping program provides a better habitat for wildlife than the creek.

3. This reach of Calabazas Creek is not a natural creek because it was excavated as a drainage ditch by farmers over a hundred years ago.

4. This reach of the creek has little or no capacity to recharge the groundwater basin.

5. Flood flows periodically remove the creek vegetation so it does not make sense to attempt to maintain a riparian environment.

6. Full development of Vallco Park is consistent with Cupertino's Master Plan for the area.

Objections to the project and the environmental impacts assessed in the DEIR came from a member of the District's Environmental Advisory Committee, Ms. Mary Anne Mark, the Sierra Club (Water Resources Division), the Department of Fish and Game, the State Water Resources Control Board, and the Department of Water Resources. Several other state agencies had specific questions but did not offer objections to the project. One federal agency, the Army Corps of Engineers, also had questions but no objections. The District's Environmental Advisory Committee wrote the District Board of Directors objecting to the project and suggesting alternatives, but well after the expiration of the public review period. For this reason, their letter is not included in the Final EIR; however, their comments were taken into consideration in modifying the project. It should be noted that the Board complied with the Sierra Club's request to circulate the DEIR to the State Clearinghouse for review.

The major comments and issues raised by the above reviewers are:

1. Destruction of a riparian habitat in the creek is a significant impact and contrary to state policies.

2. Loss of groundwater recharge capacity is also a significant impact and the project could result in "a waste and unreasonable diversion of water".

3. Selection of an alternative that has the most adverse impacts when there are feasible alternatives that would have less impact on the creek appears to violate the intent of the California Environmental Quality Act.

4. The proposed mitigation measure to backfilling the creek by providing $60,000 to create a landscaped percolation pond is too vaguely described and not adequate to replace the lost riparian habitat.

It is obvious that the proposed project brought about a classic confrontation between land development interests and environmental interests.

As a result of these comments and further evaluation of the impacts stated in the DEIR, District staff sought to find a workable alternative project that would satisfy both proponents and opponents. Meetings were held with and between representatives of Vallco Park, the Environmental Advisory Committee, and the state regulatory agencies. Finally, a compromise project was developed, Alternative No. 7, which substitutes a landscaped earth channel in the downstream section for the buried box culvert originally proposed.*

The new project removes several of the important objections to the previous project. Groundwater recharge will not be impaired since the box culvert will be constructed only in the upstream section of the floodplain where recharge is poor or nonexistent.

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*Letters from the Department of Fish and Game and the State Water Resources Control Board supporting the revised project in concept are included in this Addendum as Attachments B and C.

Although the existing riparian habitat will be lost when the creek is backfilled, landscaping the earth channel section can potentially provide a higher quality habitat than now exists. Stable, gentle side slopes and proper maintenance will be beneficial to restoration. The design of the earth channel and the restoration/maintenance program will eliminate or reduce the safety, aesthetic and social problems associated with the existing creek.

With regard to the land use issue, realigning the upstream section in a buried box culvert will allow Vallco Park maximum use of the land in this area, particularly the valuable acreage fronting Stevens Creek Boulevard. From Vallco Parkway extension to Interstate 280, Vallco will have less flexibility due to the open channel (145 feet of right of way), but imaginative planning could turn the landscaped channel into an asset for Vallco Park. The placement of the creek in a box culvert to accommodate Vallco's development plans will result in the one significant impact that cannot be entirely mitigated; probable disruption in the open wildlife corridor that now exists connecting Calabazas Creek upstream and downstream of the project reach. Admittedly, the creek in this area is not a major riparian habitat relative to several other nearby creeks; however, undergrounding the creek for 900 feet will most likely permanently break that link. The long-term significance of this impact will also depend upon the type of flood control projects for Calabazas Creek that the District constructs upstream and downstream of the Vallco Park reach. These projects are now being studied by the District staff.

6/13 BHG w/A
JLR
LCF

STATE OF CALIFORNIA—RESOURCES AGENCY

EDMUND G. BROWN JR., Governor

DEPARTMENT OF FISH AND GAME
1416 Ninth Street
Sacramento, California 95814
916-445-3531

ATTACHMENT B

June 9, 1977

Dr. Bernard H. Goldner
Santa Clara Valley Water District
5750 Almaden Expressway
San Jose, California 95118

Dear Dr. Goldner:

On March 18, 1977, this Department sent you a letter indicating our preferred fish and wildlife mitigation solution for a proposed flood and erosion control program for Calabazas Creek, Santa Clara County.

In our letter, we indicated we believed the best fish and wildlife mitigation solution would be modification of Alternative I in which a new double 9' x 11' box culvert bridge would be constructed at Stevens Creek Boulevard, with bank protection provided at the most critical points along the creek, while the remainder of the creek and its riparian growth would be retained in its existing condition.

At the same time, the landowner of the area involved has indicated the only acceptable flood control project for them is to put 1700 feet of the creek into a closed concrete storm drain.

In order to clarify the needs and responsibilities of the parties involved and to determine whether there were other previously unexplored ways of achieving the original flood control objectives and protection of the wildlife resources, a meeting was set up on May 12, 1977 between District, Department and property owner representatives.

During the meeting, the following two additional alternatives were explored:

1. Bury the 1700 feet of Calabazas Creek in an enclosed culvert and attempt to replace the habitat lost by including native vegetation in landscape plans for the parking lot and around buildings.

2. Replace the existing creek channel with a new channel to the south of the existing one. Starting at Interstate 280 the first 700 feet, would be in a gently sloping earth lined channel. The banks of this channel would be planted with native vegetation on both sides. The remaining 900 feet of channel would be enclosed in a combination of box culvert and open channel box (Figure 1).

We have reviewed both of these alternatives and believe that wildlife mitigation and our responsibilities under Section 1603 of the California Fish and Game Code can better be met under the second alternative. We therefore recommend the District pursue further design studies to determine the engineering feasibility of the second alternative.

In addition, we recommend the project be designed in such a manner that it either does not impede future fish passage and/or be designed so future fish passage facilities can be easily installed in the event a future fishery is developed.

Sincerely,

E C Fullerton

Director

cc: Walt Smith, Region 3
Warden Hoffmann
Assemblyman Hayden
Senator Jerry Smith
Jim Messersmith
Ray Dunham, State Water Resources Control Board

CBW W/H 6/23
EEF
LCF

STATE OF CALIFORNIA—THE RESOURCES AGENCY
EDMUND G. BROWN JR., Governor

STATE WATER RESOURCES CONTROL BOARD
P.O. BOX 100
SACRAMENTO, CA 95801
(916) 322-4501

ATTACHMENT C

IN REPLY, PLEASE REFER TO:
420:LRD

JUN 21 1977

Mr. Bruce Wilson
Division Engineer
Design Section
Santa Clara Valley Water District
5750 Almaden Expressway
San Jose, CA 95818

PROJECT NO. 2010; CALABAZAS CREEK (STEVENS CREEK BOULEVARD TO INTERSTATE 280); SCH 77040494

On May 12, 1977, Ray Dunham represented the Board's staff at a meeting in the District office to discuss our comments of April 26, 1977, on the subject project. At the meeting, it was agreed that the staffs of this Board and the Department of Fish and Game would review a new alternative to the project and provide their comments to you.

As shown on the attached preliminary drawing, the proposed alternative would consist of realigning the existing channel on the affected reach, enclosing the 900 feet of channel between Stevens Creek Boulevard and Vallco Parkway in a box culvert, and landscaping the remaining 700 feet of earth channel with native plants. The enclosed section would have several openings in the top to allow natural lighting within the culvert to induce wildlife passage along the Creek.

Our primary concern with the previous proposal to enclose the entire section of the Creek in a culvert was that a significant loss of groundwater recharge capability would be lost. Based on our review of the reports by Tom I. Iwamura, Engineering Geologist, we concur that the lower section of the Creek, which would remain as an earth channel in the new alternative, is where most of the recharge capability of the entire section is located. Therefore, there apparently would be no significant loss of recharge capability by enclosing the channel between Stevens Creek Boulevard and Vallco Parkway.

If the District decides to give further consideration to the new alternative, you may wish to explore the use of reinforced concrete grid sections for the bottom of the culvert. The sections are made with plastic "knock-out" blocks in the forms in a pattern which will allow a moderately high percentage of the natural recharge to take place after installation.

Thank you for providing the information which we requested for review. If we can be of further assistance, please contact Mr. Ray Dunham at 916-322-4515.

L R Dunham
for THOMAS E. BAILEY, Acting Chief
Division of Planning and Research

Attachment

cc: Mr. E. C. Fullerton
Director
Department of Fish and Game
1416 Ninth Street
Sacramento, CA 95814

Senator Jerry Smith
State Capitol, Room 4090
Sacramento, CA 95814

3/25 - BHG W/A (orig)
JLK "
LCJ

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[illegible] R

DEPARTMENT OF THE ARMY
SAN FRANCISCO DISTRICT, CORPS OF ENGINEERS
211 MAIN STREET
SAN FRANCISCO, CALIFORNIA 94105

SPNED-EA

22 March 1977

Dr. Bernard H. Goldner
Environmental Specialist
Santa Clara Valley Water District
5750 Almaden Expressway
San Jose, California 95118

Dear Dr. Goldner:

Reference is made to your notice of 23 February 1977 requesting review of the Draft EIR and Draft Engineer's Report concerning Flood and Erosion Control Measures for the Reach of Calabazas Creek between Stevens Creek Boulevard and Interstate 280.

The Corps does not currently have a project or study on Calabazas Creek, however, the District has recently studied a portion of the Creek in connection with the Sunnyvale Flood Insurance Study. In addition, the District is currently studying two nearby streams, Coyote Creek and the Guadalupe River. Therefore, improvements on Calabazas Creek are of interest to this office. Our comments, which are primarily concerned with the Draft EIR, are attached.

Thank you for the opportunity to review your report.

Sincerely yours,

H E Pape, Jr

H. E. PAPE, JR.
Chief, Engineering Division

VANGUARD OF FREEDOM
BICENTENNIAL 1775 1975
UNITED STATES ARMY

AMERICAN REVOLUTION BICENTENNIAL
1776-1976

San Francisco District Comments

Review of Draft Engineer's Report and Draft Environmental Impact Report on Proposed Flood and Erosion Control Measures for Calabazas Creek (Stevens Creek Boulevard to Interstate 280) North Central Zone, Project No. 2010

Review of the subject DEIR was limited to the areas of flood control, navigation and water quality. The following comments relate to the content and completeness of the DEIR, and not to the merits of, or the need for, the proposed project:

a. Page 5 of the DEIR indicates that the project area has been used as a groundwater recharge area and " . . . could be used again when a supplemental supply of water is delivered to Santa Clara County." It is suggested that the preceding statement be revised; it would seem that gravel dams could be used now, without supplemental water, to enhance the recharge capability of the stream in the project area.

b. Page 5 also indicates that the box culvert will be " . . . designed to be large enough to accommodate the one percent flood." The report should discuss and present the extent of flooding for floods greater than the one-percent event. It could be possible that the extent and amount of flooding for events less frequent than the one-percent event could be greater under project conditions than under existing conditions, due to the inability of flood waters to return to the creek.

c. The discussion of water quality under existing and project conditions seems adequate. Water quality during construction, however, is not discussed. Page 30 of the report does discuss project-related impacts, but does not include a discussion of water quality impacts. Although the impacts may be minor, the report should present and discuss the impacts of construction of the project on water quality; possible mitigation measures should also be discussed if appropriate.

d. Construction of a concrete box culvert will produce flow velocities at the downstream end of the project which will be in excess of velocities which would be attained under existing conditions; flow near Interstate 280 may be unstable. The DEIR should discuss any impacts which may be associated with the acceleration of flow through the project reach on the downstream channel, as well as mitigative methods, such as design features, to reduce the impact.

5/6 BHG w/A LCF
JLR

State of California
GOVERNOR'S OFFICE
OFFICE OF PLANNING AND RESEARCH
1400 TENTH STREET
SACRAMENTO 95814

EDMUND G. BROWN JR.
GOVERNOR

May 12, 1977

Dr. Bernard H. Goldner
Santa Clara Valley Water District
5750 Almaden Expwy.
San Jose, CA 95118

SUBJECT: SCH# 77040494 Draft EIR on Proposed Flood and Erosion Control Measures for Calabazas Creek

Dear Dr. Goldner,

This is to certify that State review of your environmental document is complete.

The results of the State review are attached. You should respond to the comments as required by the California Environmental Quality Act. You should address your responses to the commenting agency with a copy to the Clearinghouse.

Sincerely,

for Susan J. Brown
William G. Kirkham
Division Chief
State Clearinghouse
(916) 445-0613

WGK/pca
Attachment(s)
cc: Ken Fellows, DWR
Mary Schell, Library
E. C. Fullerton, Fish and Game
Bill B. Dendy, SWRCB
Thomas E. Gay, Conservation
James P. Tryner, P&R
G. Donald Meixner, DWR
E. V. Toffoli, Fish and Game

17 [illegible]

State of California **The Resources Agency**

Memorandum

To : 1. L. Frank Goodson, Projects Coordinator
Resources Agency
1416 Ninth Street
Sacramento, California 95814

2. Santa Clara Valley Water District
5750 Almaden Expressway
San Jose, California 95118

Date April 27, 1977

From : **Department of Fish and Game**

Subject: Draft Engineer's Report and Draft EIR on the Proposed Flood and Erosion Control Measures for Calabazas Creek, Santa Clara County, (SCH 77040494).

The attached March 18, 1977 letter contains our comments on the subject report.

Director

Attachment

Calabazas Creek
Santa Clara Co.

EDMUND G. BROWN JR., Gov

STATE OF CALIFORNIA—RESOURCES AGENCY

DEPARTMENT OF FISH AND GAME

Post Office Box 47
Yountville, California 94599
(707) 944-2443

March 18, 1977

Dr. Bernard H. Goldner
Santa Clara Valley Water District
5750 Almaden Expressway
San Jose, California 95118

Dear Dr. Goldner:

Thank you for the opportunity to review and comment on the DEIR on Proposed Flood and Erosion Control Measures for Calabazas Creek, Santa Clara County.

None of the alternatives studied except No. 1 considers wildlife and its habitat. Wildlife habitat cannot be provided by concrete lining or a rock lined channel. We are very much concerned that putting 1,700 feet of Calabazas Creek into a covered box culvert will lead to similar decisions for other reaches of it.

Your mitigation offer of $60,000 to set aside and supplemented with other mitigation money from future projects to finance a percolation riparian area is not acceptable, as mitigation should be designed to compensate for the fish and/or wildlife habitat that is lost on an acre for acre basis, not on a monetary basis. For example, if one acre of riparian habitat is lost, then one acre of similar habitat should be created elsewhere.

In our opinion, the best mitigation solution would be modification of Alternative 1, in which a new double 9' X 11' box culvert bridge would be constructed at Stevens Creek Boulevard, with bank protection provided at the most critical points along the creek, while the remainder of the creek and its riparian growths be retained in its existing condition.

Sincerely,

COPY ORIGINAL SIGNED BY
W. B. BURKHEAD

E. V. Toffoli
Regional Manager
Region 3

State of California **THE RESOURCES AGENCY**

Memorandum

To : 1. Mr. L. Frank Goodson
Projects Coordinator
Resources Agency
Resources Building, 13th Floor

2. Dr. Bernard H. Goldner
Santa Clara Valley Water District
5750 Almaden Expressway
San Jose, CA 95118

Date: APR 26 1977

In Reply Refer To: 420:GH

From : **STATE WATER RESOURCES CONTROL BOARD**
DIVISION OF PLANNING AND RESEARCH

Subject: REVIEW OF NOTICE OF INTENT: SCH 77040494
Draft Environmental Impact Report - Proposed Flood and Erosion Control Measures for Calabazas Creek

Introduction:

Review of this project has been coordinated with the State Board's Legal Division and Division of Water Rights and with the California Regional Water Quality Control Board, San Francisco Bay Region. The following comments have been developed.

Recommendations:

1. The EIR should be expanded to include consideration of alternatives which provide minimum disturbance or in-place mitigation for the loss of riparian habitat. Such alternatives should include slope stabilization and revegetation of only the steep nonvegetated slopes and diversion of all but maximum flows to a surface channel with revegetated banks.

2. The district should review its apparent decision to prefer construction of a buried double box culvert in the light of the circumstances leading up to the State Board's Decision D-1460. The DEIR indicates that selection of the buried box culvert alternative may not be in compliance with Public Resources Code Sections 21002 and 21002.1.

   The California Environmental Quality Act (CEQA) requires public agencies, when approving or carrying out projects, to mitigate or avoid significant impacts on the environment where it is feasible to do so (Public Resources Code Sections 21002 and 21002.1). While the District's Draft EIR purports to have complied with this mandate, in substance it has not. The Draft EIR indicates that the District selected the alternative that will have the greatest adverse impact on the environment. Construction of the buried double box culvert will entail the filling of the present streambed for the reach in question, which will destroy a rich and varied riparian habitat, and eliminate 10 percent of the total groundwater recharge potential for Calabazas Creek. Since the EIR concedes that the other five alternatives will adequately accomplish the flood control purposes of the project, it appears that the District placed other considerations above the environment in priority.

The only clear advantage for building the underground culvert is that it will maximize land use; filling the existing streambed will create usable land, and limited development can take place over the buried culvert. However, the law requires that feasible alternatives or feasible mitigation measures should be utilized. There are several feasible alternatives which would have a less significant effect on the riparian habitat of this stretch of Calabazas Creek, including Alternatives 1 and 3 listed in the Draft Engineer's Report and Draft EIR for the project. Another feasible alternative that was not explored in the Draft EIR is to shape the existing channel so as to control erosion, without lining it with rocks, concrete, or other habitat-destructive materials.

Available feasible mitigation measures for the project are, as the Draft EIR acknowledges, limited. The Draft EIR proposes allocating $60,000, plus future unspecified amounts of money, for the creation of a new groundwater recharge area and construction of a new habitat riparian to the pond. However, this appears in the Draft EIR as merely something for the District to consider; the site for the relocation has not been selected, detailed plans have not been prepared, and institutional arrangements that might be required have not been made. Due to the uncertainty of the scope of, or the actual commitment to create the new recharge area and habitat, it cannot be said that the District has included a feasible mitigation measure in its Draft EIR. Further, even if plans for the relocation did crystalize, it is unclear that this proposal would adequately mitigate the adverse environmental effects; filling the streambed will forever disrupt the riparian corridor, thus curtailing the movement of wildlife to more extensive habitat up and downstream. Creation of a new habitat around a pond that is disassociated from the stream will not ameliorate this problem. One possible alternative mitigation measure would be to divert part of the flow intended for the underground culvert to a new surface channel, which would continue the corridor. The District should also consider the alternative of stabilizing only the areas of steep, nonvegetated slopes since those appear to be most susceptible to erosion. The steep areas could be graded to an approximate 3:1 slope and then replanted with vegetation to minimize erosion. This alternative would tend to have less adverse effect on riparian vegetation.

This case presents several parallels to the Board's Dry Canyon Decision (No. 1460). In that case, the Los Angeles County Flood Control District undertook to divert the entire flow of Dry Canyon Creek for flood control purposes, thus endangering the survival of an extensive riparian habitat. Preservation of low flows to support riparian vegetation would not have prejudiced the flood control purposes. The Board, pursuant to the duty imposed by Water Code Section 275, found this to constitute both a waste and unreasonable method of diversion of water. The present case is also a flood control project that threatens to destroy an extensive riparian habitat.

for Bill B. Dendy
Executive Officer

State of California **The Resources Agency**

Memorandum

To : L..Frank Goodson
Project Coordinator
Resources Agency

Dr. Bernard H. Goldner
Santa Clara Valley Water District
5750 Almaden Expwy
San Jose, CA 95118

Date : April 25, 1977

From : Department of Conservation
Division of Mines and Geology—San Francisco 94111

Subject: SCH 77040494. Draft EIR, Flood Control Measures, Calabazas Creek

This Report discussed proposed measures to provide adequate flood and erosion control on Calabazas Creek between Stevens Creek Blvd. and highway Interstate 280.

The report has been reviewed by staff, and the following comments are offered for consideration in the preparation of the final EIR.

1. The draft report does not seem to take into consideration the fact that any alteration of any part of a natural stream channel effects changes in the hydrologic regime of the channel above and below the altered part.
2. The report does not make clear whether or not the 1% flood would cause water to back up behind Stevens Creek Blvd. because of the constricted flow through the box culvert.
3. The report does not discuss the geologic impact of probable increased erosion downstream as a result of channelization in the box culvert.

Richard M. Stewart
RICHARD M. STEWART
District Geologist
San Francisco District Office

RMS/mkr

APPROVED:

John T. Alfors, Chief Deputy
R.G. 774

Thomas E. Gay Jr.
State Geologist
R.G. 2634

APPROVED:

State of California **The Resources Agency**

Memorandum

To : 1. L. Frank Goodson, Projects Coordinator
Resources Agency
2. Mr. John T. O'Halloran, General Manager
Santa Clara Valley Water District
5750 Almaden Expressway
San Jose, CA 95118

Date : MAY 10 1977

File No.:

Subject: SCH 77040494
Draft Engineer's Report and Draft Environmental Impact Report on Proposed Flood and Erosion Control Measures for Calabazas Creek (Stevens Creek Blvd. to Interstate 280), North Central Zone Project No. 2010

From : **Department of Water Resources**

We have reviewed the subject reports which were transmitted by the State Clearinghouse Notice of Intent, dated April 4, 1977, and have the following comments:

A project alternative which would preserve the groundwater recharge capability of the existing stream should be selected, since such an alternative would accomplish the basic flood control purpose. Additionally, such an alternative could help preserve valuable riparian habitat along the stream.

The summary (page 1) does not appear to meet the requirements of Section 15140 (b) of the State EIR Guidelines which states, in part, "Each report shall contain a brief summary of the proposed action and its consequences in language sufficiently simple that the issues can be understood by the average member of the lay public"... A more informative summary should be included in the final EIR.

G. Donald Meixner

G. Donald Meixner, Chief
Resource Evaluation Office

State of California **The Resources Agency of California**

Memorandum

To : Mr. James P. Tryner, Chief
Resource Preservation and
Interpretation Division

Date : April 22, 1977

Subject : SCH 77040494 DEIR -
Calabazas Creek Flood and
Erosion Control Measures,
Cupertino, Santa Clara Count

From : **Department of Parks and Recreation**

The Office of Historic Preservation has reviewed the Draft Environmental Impact Report submitted by the Santa Clara Valley Water District for the project referenced above.

Although this Office concurs that at this point in time a field reconnaissance of the area to be disturbed by the project appears to be unnecessary, an archeological site records search should be made in order to establish the potential archeological sensitivity of the area in question. In addition, the Office of Historic Preservation suggests that the Final Environmental Impact Report contain recommendations providing for the evaluation of unrecorded values which may be discovered as a result of project activity and for the prudent and feasible mitigation of potentially adverse project impacts upon those values.

Should you have questions regarding this review, please contact Hans Kreutzberg, Office of Historic Preservation by calling (916) 322-2682 or writing to P. O. Box 2390, Sacramento, CA 95811.

Knox Mellon wp

Dr. Knox Mellon
Historic Preservation Coordinator

R-5/6

cc: Mr. Rob Edwards
Department of Anthropology
Cabrillo College
6500 Soquel Drive
Aptos, CA 95003

KM:HK

OFFICIAL COMMENTS, DEPARTMENT OF PARKS AND RECREATION.

James P. Tryner

4/25/77

James P. Tryner, Chief
Resource Preservation and Interpretation Division

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JLR
LCF

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EIR

STATE OF CALIFORNIA—RESOURCES AGENCY

EDMUND G. BROWN JR., Governor

DEPARTMENT OF FISH AND GAME
Post Office Box 47
Yountville, California 94599
(707) 944-2443

March 18, 1977

Dr. Bernard H. Goldner
Santa Clara Valley Water District
5750 Almaden Expressway
San Jose, California 95118

Dear Dr. Goldner:

Thank you for the opportunity to review and comment on the DEIR on Proposed Flood and Erosion Control Measures for Calabazas Creek, Santa Clara County.

None of the alternatives studied except No. 1 considers wildlife and its habitat. Wildlife habitat cannot be provided by concrete lining or a rock lined channel. We are very much concerned that putting 1,700 feet of Calabazas Creek into a covered box culvert will lead to similar decisions for other reaches of it.

Your mitigation offer of $60,000 to set aside and supplemented with other mitigation money from future projects to finance a percolation riparian area is not acceptable, as mitigation should be designed to compensate for the fish and/or wildlife habitat that is lost on an acre for acre basis, not on a monetary basis. For example, if one acre of riparian habitat is lost, then one acre of similar habitat should be created elsewhere.

In our opinion, the best mitigation solution would be modification of Alternative 1, in which a new double 9' X 11' box culvert bridge would be constructed at Stevens Creek Boulevard, with bank protection provided at the most critical points along the creek, while the remainder of the creek and its riparian growths be retained in its existing condition.

Sincerely,

Watson Burkhead
for
E. V. Toffoli
Regional Manager
Region 3

VVE
GSK
LCF

3/22

2010
Vallco
EIR

SIERRA
CLUB

1176 Emerson St.
Palo Alto, Ca 94301

~~530 Bush Street, San Francisco, California 94108 (415) 981-8634~~

March 20, 1977

Northern California Regional Conservation Committee
Water Resources Division

Board of Directors
Santa Clara Valley Water District
5750 Almaden Expressway
San Jose, Ca 95118

Re: draft EIR, Calabazas Creek
280 to Stevens Creek Blvd.

Honorable Board Members:

This statement will serve to amplify our letter of March 18. We also wish to correct a typographical error which was inadvertently contained in that letter, first page, 4th paragraph, line 3. The reference to 8% interest rate should have been 6%.

WE also wish to clarify the reference to benefits to Vallco resulting from use of the land over the proposed easement for the culvert, page 2, paragraph 3, lines 2 & 3. While Vallco would certainly benefit from use of this land and at the figure mentioned in our letter, we do not mean to include this figure in our calculation of monetary benefits accruing to Vallco as a result of public subsidy. Thus, on page 2, paragraph 4, line 2, the total figure for public subsidy accruing accruing to Vallco should read $1,202,000. The number appearing there was inadvertently carried from page 42 of the Engineers Report. Please ink in these changes on the original copy. We hope that no confusion has resulted from these inadvertent errors. Volunteer groups do not have the benefits of several layers of review, as do public agencies.

We wish to emphasize certain portions of the Public Resources Code:

> Section 21002.1 states that .."The purpose of an EIR is to...identify alternatives to the project, and to indicate the manner in which such significant effects can be mitigated or avoided."(emphasis added)..."Each public agency shall mitigate or avoid the significant effects on the environment of projects...whenever it is feasible to do so."...
>
> Section 21081 states that..."no public agency shall approve or carry out a project for which an EIR has been completed which identifies one or more significant effects thereof unless such public agency makes one, or more of the following findings:.. Changes.have been required..which mitigate or avoid the significant environmental effects thereof... specific economic, social, or other considerations make infeasible the mitigation measures or project alternatives identified in the EIR".

The significant effects on wildlife habitat and groundwater recharge can be avoided by maintaining the stream as an earth channel. There is no mitigation measure to alternative 6 (elimination of the stream into a culvert) which would maintain the entire stream as a corridor for wildlife passage or for utilizing native water for groundwater recharge with reduction in the necessity for mitigation with imported water. It is perfectly feasible for Vallco to design their project to incorporate the stream. Circulation could be accomplished by bridges and pedestrian footpaths. Maintenance of the stream would be an asset to the development, if properly planned for. Proper planning is what the EIR process is supposed to encourage. This EIR must disclose and discuss the alternatives open to Vallco for their development, if this development is supposed to be the guiding principle for the District's project.

Regarding the findings required by Section 21081 of the Pub. Res. Code, Section 15088 of the CEQA guidelines state that .."the findings...shall be supported by substantial evidence in the record". Section 15143b states that...Where there are impacts that cannot

The EIR does not place sufficient emphasis on the loss of wildlife habitat. This one blockage and elimination of habitat in the center of a continuous stream essentially disrupts the usefullness of the entire stream for habitat. We are very disappointed that the District could even seriously consider such an alternative.

There is no public benefit whatsoever from alternative 6, elimination of this segment of stream. There is significant environmental impact to the entire watershed, and loss of a public water supply to the entire district. There is now no flooding problem to any developed land. This project would benefit one and only one private individual,- the Vallco Corporation .

Benefits to Vallco include the gain of 3 acres of former stream, at $130,000 per acre (EIR, p. 26), in the amount of $390,000, and the use of approximately another 3 acres over the proposed culvert, for another $390,000. Another benefit to Vallco would be avoidance of spending $200,000 for a bridge over the stream at Vallco Parkway. Other benefits to Vallco would include the avoidance of expenditures to construct pedestrian bridges over the stream as their development proceeds. And, obviously, the taxpayers of the District would be subsidizing the cost of the flood control improvements-$612,000.

The above calculations, based on stated figures in the EIR, show that Vallco Corp. would receive benefits totalling about $1,692,000, from public subsidy, and not including the costs Vallco would save by avoiding the need to build pedestrian bridges. The public would directly expend $612,000 in funds, lose $463,000 in recharge benefits and credibility with state agencies for dedication to local water conservation, and would suffer the loss of wildlife habitat in this segment and throughout the entire stream.

This project would also set a bad precedent for the District. The rationale used and disdain for wildlife habitat and groundwater recharge is typical of the Los Angeles County Flood Control District and has resulted in the problems inherent to Los Angeles Basin. The Board must take the leadership now and instruct the staff that stated policies of the District Act and Board are to be taken seriously and implemented. The Sierra Club objects to alternative 6 and will oppose it. We request that you instruct the staff to follow alternative 1 or 3, if the District is to be involved in work in this reach at all. Since there is no obvious flooding problem, we do not see any need for public expenditures here at all. We believe that Vallco should pay for any desired "flood control" in this reach. However, since we would prefer public participation, since a public resource is involved, we would support District participation in Alternatives 1 or 3 or similar alternatives that preserve groundwater recharge and riparian habitat, both in this segment and throughout the stream.

We believe that action other thanthis would lead to a record that could not support an adequate EIR or Statement of Overriding Consideration, which this Board must prepare if Alternative 6 is pursued. We therefore recommend the preparation of a revised draft EIR, with circulation to agencies having jurisdiction by law. We also request that you consult with the Sierra Club before completion of this revised draft EIR, in order to avoid the procedural inadequacy made when this EIR was not coordinated before publication.(Public Resources Code Sects. 21002.1b and 21081 refer to overriding considerations and CEQA guidelines Sect. 15085 bl require early consultation.) We would be happy to work with your staff on developing alternatives and formulating an adequate EIR and sound project.

Sincerely,

Jake Miller

Jake Miller

cc: Ron Robie
John Bryson

STATE OF CALIFORNIA
STATE WATER RESOURCES CONTROL BOARD

In the Matter of Alleged Waste, Unreasonable Use, Method of Use, or Method of Diversion of Water by LOS ANGELES COUNTY FLOOD CONTROL DISTRICT, Respondent, SIERRA CLUB ET AL., Complainants.	Additional Concurring Comments to Decision 1460

BY BOARD MEMBER DODSON:

There is no doubt that the dissent expressed by Mr. Maughan and Mr. Adams is made in all sincerity. However, I feel compelled to point out that, having heard and read the same facts that the Dissent finds inconclusive and unconvincing, I come to exactly the opposite finding. Having toured the Dry Creek area I am convinced that, not only is there a threat of harm to the environment, there is a rather strong assurance of harm, even the destruction, of environmental values, especially of the many magnificent valley oak trees 100 or more years in age.

As to the policy question, it is easy to say that this Board should allow local agencies to decide local issues, and that this Board should exercise great caution in becoming involved in such a seemingly minor case which seems to threaten "home rule".

in Los Angeles County which diverts all surface flows from the creeks into a storm drain, and also collects intervening tributary runoff by means of two lateral drains. The storm drain discharges back into the natural channel at a point downstream. The Dry Canyon Project affects approximately 3,500 feet of natural water course.

Complainant Sierra Club alleges that construction of the project has resulted in waste, unreasonable use, unreasonable method of use or unreasonable method of diversion of water, prohibited by Article X, Section 2 of the California Constitution (formerly Article XIV, Section 3).

Jurisdictional Matters

2. Respondent District contends that the Sierra Club lacks standing as an "interested or affected person" to initiate a request for a hearing under Article 17.4, Title 23, California Administrative Code. This contention is without merit.

The Board, as an administrative rather than a judicial agency, is authorized to conduct investigations, hold hearings, and initiate lawsuits on its own motion with respect to subjects within its jurisdiction. (See, for example, Water Code Section 275; Government Code Section 11180; People ex rel. State Water Resources Control Board v. Forni, 54 Cal.App.3d 743, 126 Cal.Rptr. 851.) The strict judicial concept of standing is therefore inapplicable to Board proceedings. The complaint of the Sierra Club, whose interest in preserving environmental values is well known, merely served to trigger independent administrative action by the Board. This is the import of the second sentence of Section 764.11 (of Article 17.4), Title 23, California Administrative Code. Administrative precedent for the Board's conclusion on this issue is found in the provision for the public interest and environmental protest in water right application proceedings before the Board; the only requirement for "standing" as a public interest or environmental protestant is that the protest state facts supporting its allegations. (Section 719(e), Title 23, California Administrative Code.)

3. Respondent District further contends that it was acting within the scope of its statutory powers in constructing the project. There is no question that District is statutorily authorized to construct projects for flood control purposes. However, there is also no question that the District's authority cannot be interpreted to contravene express provisions of the California Constitution. (Hatfield v. People's Water Co. 25 Cal.App. 502, 144 Pac. 300.)

4. Other jurisdictional contentions of the District found to be without merit are the following:

a. That the Board lacks authority to conduct a hearing regarding a nonconsumptive, nonappropriative diversion.

Neither Water Code Section 275, nor the underlying constitutional provisions, nor any decisional law interpreting these provisions, make such a distinction.

b. That the jurisdiction of the Board is limited to the question of unreasonable method of diversion.

District advances no persuasive support for this contention and none can be found.

c. That environmental considerations of this project are not subject to further review.

Full disclosure of environmental impacts does not guarantee that a project will not adversely affect beneficial uses. Thus, compliance with the procedural requirements of the California Environmental Quality Act does not legitimize either waste of water or an unreasonable method of diversion of water within the meaning of Article X, Section 2 of the California Constitution.

Findings as to Waste, Unreasonable Use, Unreasonable Method of Use, and Unreasonable Method of Diversion

5. The preproject flows in Dry Canyon and South Fork Dry Canyon supported then existing legally cognizable beneficial uses, including recreation, and maintenance of wildlife habitat, esthetic values, and valued oak trees.

6. The District's project will remove all surface flows entering the upstream portions of the project area. Some runoff from the watershed tributary within the project reach will remain temporarily in the natural channels until removed by one of the two downstream laterals.

7. The removal of water by the project will have an adverse impact on the existing beneficial uses. There will be a

loss of vegetation; the lack of water in the channels will make the immediate area substantially less esthetically appealing to the local community; wildlife habitat will be lost.

Evidence was presented that the oak trees in the project area need water from 10 to 20 feet below the surface, that any significant lowering of the water table could offset the growth and vigor of the trees, and that they could die (see, e.g., RT 39, 46).

Although the evidence is insufficient to find to a certainty that the irreplaceable oak trees in the project area will necessarily die from lack of water, it is concluded that the trees bear a substantial risk of harm, a risk this Board believes need not be taken.

8. Rights to the water flowing in Dry Canyon and South Fork Dry Canyon are within the pueblo right of the City of Los Angeles. Evidence establishes that the project has no significant effect upon that right or upon the City's water supply. (RT 86, 87; District Ex. 2, "Correspondence", letter dated October 31, 1975, from Department of Water and Power of the City of Los Angeles to District.) On the other hand, no evidence was presented to show that, in the preproject condition, evapotranspiration loss in the reaches affected by the project was significant to the City's water supply, nor does the record show that salvage of water is a project purpose. It is therefore found that the project significantly adversely impacts existing beneficial uses associated with the affected reaches of Dry Canyon

and South Fork Dry Canyon without significantly augmenting the supply of water available for other beneficial uses.

9. The removal of all flows entering the upstream portion of the project area is not necessary to fulfill the flood control purposes of the project.

The record contains an unsubstantiated estimate that the flood control purposes could be met 90 percent as well with a low flow bypass. Evidence presented by qualified engineers and analysis thereof leads us to conclude otherwise.

10. The diversion of all flows is strongly opposed by residents of the immediate project area; students, faculty and administration of Calabasas High School, the grounds of which are traversed by the South Fork Dry Canyon channel; and persons expressing a regional and statewide environmental interest.

11. The adverse impacts on beneficial uses and associated risks to wildlife and other natural resources can reasonably be avoided if the District installs devices capable of bypassing low, nonflood flows at the entrance to the project facility on South Fork Dry Canyon (at the lower end of P.D. 1107) and at the inlets to the two downstream lateral drains.

CONCLUSION

THE BOARD FINDS THAT diversion of nonflood flows by the Los Angeles County Flood Control District in the Dry Canyon Project constitutes both a waste and an unreasonable method of diversion of water.

ORDER

IT IS HEREBY ORDERED that:

1. On or before January 1, 1977, the Los Angeles County Flood Control District shall submit to the Executive Officer of the State Water Resources Control Board, for his approval, design criteria for construction of devices capable of bypassing nonflood flows from its Dry Canyon Project into the natural channels at the entrance to the project facility on South Fork Dry Canyon (P.D. 1107) and at the inlets to the two downstream lateral drains.

2. On or before March 1, 1977, the Los Angeles County Flood Control District shall submit to the Executive Officer final plans and specifications for construction of such devices. The plan shall include a time schedule for completion of the necessary works, completion to be not later than October 1, 1977, and shall be satisfactory to the Executive Officer.

3. The Executive Officer is authorized to refer this matter to the Attorney General at any time for appropriate legal action, should the District fail to comply with the provisions of Nos. 1 and 2 above.

Dated: OCT 21 1976

Roy E Dodson
Roy E. Dodson, Member

John E. Bryson
John E. Bryson, Chairman

Jean Auer
Jean Auer, Member

SEE ATTACHED
DISSENT FROM DECISION
W. Don Maughan, Member

SEE ATTACHED
DISSENT FROM DECISION
W. W. Adams, Member

STATE OF CALIFORNIA
STATE WATER RESOURCES CONTROL BOARD

In the Matter of Alleged)
Waste, Unreasonable Use,)
Method of Use, or Method)
of Diversion of Water by)
)
LOS ANGELES COUNTY FLOOD)
CONTROL DISTRICT,)
)
Respondent,)
)
SIERRA CLUB ET AL.,)
)
Complainants.)
)

Dissent from
Decision

BY BOARD VICE CHAIRMAN W. DON MAUGHAN AND MEMBER W. W. ADAMS:

We respectfully dissent from the Board's Decision.

The key issue in this case concerns the absence of a low-flow bypass in the Dry Canyon Flood Control Project which, it is alleged, is needed to bypass water to sustain beneficial uses in the natural stream channels. Our review of the evidence, the staff report, and the Board's Decision does not persuade us. We find the Decision inappropriate both on the facts and as a matter of Board policy.

The Facts

First, we disagree with the conclusion drawn by the majority from the evidence. The majority conclude that the removal of water by the project constitutes both a waste and an unreasonable method f diversion of water. We believe that evidence on waste is not found in the hearing record. It is based on the unproven premise that the project significantly adversely impacts on existing beneficial uses associated with the affected reaches of Dry Canyon and South Fork Dry Canyon without significantly augmenting the supply of water available for other beneficial uses. The evidence does not establish the extent of the relationship between preproject water, either surface flows or levels of ground water, and the natural vegetation, nor whether the flood control channel will reduce the availability of soil moisture to an extent that there will be significant adverse impacts on that vegetation. There was evidence that sources of surface and subsurface water will continue to be available under postproject conditions. There are conflicting statements, not hard facts, as to what might happen to existing vegetation.

Further, the evidence shows that the Department of Fish and Game representative testified that the project would not significantly affect wildlife habitat (RT 156, et seq.). The Department entered into an agreement with the District which the Director of that Department has characterized as providing adequate protection for wildlife resources affected by this project. (Letter of October 10, 1975, from E. C. Fullerton, Director, Department of Fish and Game.)

The majority conclude that the oak trees in the project area bear a substantial risk of harm from lack of water. However, as we have pointed out, the evidence is inconclusive as to the extent of surface and ground water before and after the construction of the project. In California, oak trees survive in natural conditions far removed from watercourses. Surely the roots of the oak trees must have access to moisture, but there is no hard evidence that this project will adversely affect these particular oak trees.

The remaining issue concerns whether or not the project constitutes an unreasonable method of diversion. As to this issue, we hold views similar to that stated above concerning the issue of waste resulting from the project. In addition, the record raises questions as to whether the full flood control purposes of the project can be met with a low-flow bypass modification. The District stated under cross-examination that 10 percent of the flood control protection might be lost with a low-flow bypass (RT 103). Others stated there would be no adverse effect on flood control. In light of the absence of conclusive evidence that the diversion would significantly impact on beneficial uses (i.e., the natural vegetation) and the conflicting testimony concerning flood control, we are unwilling to conclude that the method of diversion is unreasonable.

State Bond Policy

As a matter of policy, we do not believe that the Board has cause to require the District to obtain Board approval of design criteria, and of plans and specifications, for devices capable of bypassing non-flood flows, or to require construction of such works to be completed no later than October 1, 1977.

The project was approved by local authorities after completion of the entire Environmental Impact Report review process. The record shows that the District complied with the procedural requirements of the California Environmental Quality Act (CEQA). The majority seek not only to involve the Board in a new frontier concerning its authority, but seek to keep the books open indefinitely regarding environmental impacts of projects which relate to watercourses even where no water right permits are required, as with purely flood control projects. This would mean that many highway culverts and almost any type of urban and rural development subject to CEQA that might affect riparian vegetation in stream channels, including those with intermittent flow, would not only have to abide by the regulations concerning environmental impacts, but would be subject to subsequent claim that the project results in a waste, unreasonable use, method of use or method of diversion of water.

It is apparent that the Board's hearing aroused the residents in the vicinity of the project much more than the District's EIR process. However, all had the opportunity during that process to participate. Perhaps the District did not inform the residents that they may be able to have both flood control and a low-flow bypass. But correction of the situation, if it is needed, sits on the doorstep of the Los Angeles County Board of Supervisors.

Finally, the extent and nature of the Board's authority under Water Code Section 275 has not been established. If the Board is legally authorized to take action against this project, a question on which we are not convinced, it should not do so without hard, conclusive evidence. Inadequate facts, as we believe we have in this case, risk poor legal precedent.

Dated: October 21, 1976

W. Don Maughan
W. Don Maughan, Vice Chairman

W W Adams
W. W. Adams, Board Member

STATE OF CALIFORNIA
STATE WATER RESOURCES CONTROL BOARD

In the Matter of Alleged Waste, Unreasonable Use, Method of Use, or Method of Diversion of Water by LOS ANGELES COUNTY FLOOD CONTROL DISTRICT, Respondent, SIERRA CLUB ET AL., Complainants.	Additional Concurring Comments to Decision 1460

BY BOARD MEMBER DODSON:

There is no doubt that the dissent expressed by Mr. Maughan and Mr. Adams is made in all sincerity. However, I feel compelled to point out that, having heard and read the same facts that the Dissent finds inconclusive and unconvincing, I come to exactly the opposite finding. Having toured the Dry Creek area I am convinced that, not only is there a threat of harm to the environment, there is a rather strong assurance of harm, even the destruction, of environmental values, especially of the many magnificent valley oak trees 100 or more years in age.

As to the policy question, it is easy to say that this Board should allow local agencies to decide local issues, and that this Board should exercise great caution in becoming involved in such a seemingly minor case which seems to threaten "home rule".

But when a very large and powerful and virtually independent single-purpose district makes no greater effort to consider the esthetic and other intangibles of the total environment than is evidenced in this case, I feel that this Board must be concerned and must take action.

There is no need to quibble about the meaning of various Code sections; the plain statements found in the California Environmental Quality Act and in the State Constitution are enough. The fact that this Board has not previously crossed into this "new frontier", merely indicates to me an overdue awakening as to what the law has said all along.

I would hope that the action of the Board, in adopting this perhaps landmark decision, will have a salutary effect on the Los Angeles County Flood Control District and on all other construction agencies in the State, to remind them that the law means what it clearly says.

Dated: OCT 27 1976

Roy E Dodson

Roy E. Dodson, Member

VVL
GSK
LCF

3/22

Vallco EIR

SIERRA
CLUB

1176 Emerson St.
Palo Alto, Ca 94301

~~530 Bush Street, San Francisco, California 94108 (415) 981-8634~~

March 20, 1977

Northern California Regional Conservation Committee
Water Resources Division

Board of Directors
Santa Clara Valley Water District
5750 Almaden Expressway
San Jose, Ca 95118

Re: draft EIR, Calabazas Creek
280 to Stevens Creek Blvd.

Honorable Board Members:

This statement will serve to amplify our letter of March 18. We also wish to correct a typographical error which was inadvertently contained in that letter, first page, 4th paragraph, line 3. The reference to 8% interest rate should have been 6%.

WE also wish to clarify the reference to benefits to Vallco resulting from use of the land over the proposed easement for the culvert, page 2, paragraph 3, lines 2 & 3. While Vallco would certainly benefit from use of this land and at the figure mentioned in our letter, we do not mean to include this figure in our calculation of monetary benefits accruing to Vallco as a result of public subsidy. Thus, on page 2, paragraph 4, line 2, the total figure for public subsidy accruing accruing to Vallco should read $1,202,000. The number appearing there was inadvertently carried from page 42 of the Engineers Report. Please ink in these changes on the original copy. We hope that no confusion has resulted from these inadvertent errors. Volunteer groups do not have the benefits of several layers of review, as do public agencies.

We wish to emphasize certain portions of the Public Resources Code:

> Section 21002.1 states that .."The purpose of an EIR is to...identify alternatives to the project, and to indicate the manner in which such significant effects can be mitigated or avoided."(emphasis added)..."Each public agency shall mitigate or avoid the significant effects on the environment of projects...whenever it is feasible to do so."...
>
> Section 21081 states that..."no public agency shall approve or carry out a project for which an EIR has been completed which identifies one or more significant effects thereof unless such public agency makes one, or more of the following findings:.. Changes.have been required..which mitigate or avoid the significant environmental effects thereof... specific economic, social, or other considerations make infeasible the mitigation measures or project alternatives identified in the EIR".

The significant effects on wildlife habitat and groundwater recharge can be avoided by maintaining the stream as an earth channel. There is no mitigation measure to alternative 6 (elimination of the stream into a culvert) which would maintain the entire stream as a corridor for wildlife passage or for utilizing native water for groundwater recharge with reduction in the necessity for mitigation with imported water. It is perfectly feasible for Vallco to design their project to incorporate the stream. Circulation could be accomplished by bridges and pedestrian footpaths. Maintenance of the stream would be an asset to the development, if properly planned for. Proper planning is what the EIR process is supposed to encourage. This EIR must disclose and discuss the alternatives open to Vallco for their development, if this development is supposed to be the guiding principle for the District's project.

Regarding the findings required by Section 21081 of the Pub. Res. Code, Section 15088 of the CEQA guidelines state that .."the findings...shall be supported by substantial evidence in the record". Section 15143b states that...Where there are impacts that cannot

"When we try to pick out anything by itself, we find it hitched to everything else in the universe." *John Muir* be alleviated without imposing an alternative design, their implications and the reasons why the project is being proposed, notwithstanding their effect, should be described". Section 15143d states that..."The discussion of alternatives shall include alternatives capable of substantially reducing or eliminating any significant environmental effects even if these alternatives substantially impede the attainment of the project objectives and are more costly."

Thus, the law clearly requires a discussion of alternative designs available to Vallco to incorportate the stream into his plans. They must be discussed in depth and with considerable diligence. The Sierra Club requests that this study be coordinated with the Club.

This EIR should have been coordinated with state agencies having jurisdiction by law, that is, jurisdiction over the resources involved. The Water Code, Section 275, specifically assigns the responsibility for water conservation and avoidance of waste of water to the Dept. of Water Resources and the State Water Resources Control Board. The Dept. of Fish and Game has clear authority over the wildlife resources, and review authority under Sect. 1601 of the Fish and Game Code. It should be noted that the 1601 review is done by Game Wardens, who are police officers, not biologists, and the appropriate review by biologists is performed during the EIR review process. We have already presented evidence of the interest and jurisdiction of the State Water Resources Control Board with respect to diversions of water from instream beneficial uses.

Thus, we again emphasize our request that you direct the staff to study alternative designs available to Vallco to incorporate the stream in development plans, and to write a revised EIR, for coordination with agencies having jurisdiction by law. This is best done through the State Clearinghouse. There is no doubt that matters of riparian wildlife habitat and loss of groundwater recharge are significant statewide matters, particularly for an area that participates in interbasin transfers of water.

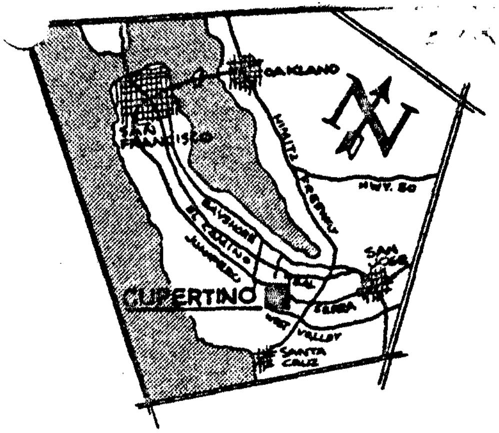
Sincerely,
Jake Miller
Jake Miller
Chairman, Water Resources

cc: Ron Robie
John Bryson
Cal. DFG

DHG
LCF
"(copy)

VALLCO PARK

P. O. DRAWER V • CUPERTINO, CALIFORNIA 95014
OFFICE: 10050 N. WOLFE ROAD, SUITE SW2-130
CUPERTINO, CALIF.
PHONE: (408) 253-4550



15 March 1977

SANTA CLARA VALLEY WATER DISTRICT
5750 Almaden Expressway
San Jose, CA. 95118

Attention: Mr. George Korbay
Design and Construction Manager

SUBJECT: Project #2010 - Draft Engineers Report and Draft Environmental Impact Report on Proposed Flood and Erosion Control Measures for Calabazas Creek/North Central Zone, February 1977

Gentlemen:

We have reviewed a copy of the subject report and wish to make the following corrections and observations:

A. Draft Engineer's Report

1. The correct name of the property owner is Vallco Park, Ltd. not Vallco Park, Limited (Pages 1, 5, 11, 35; Plates 2 and 3). This partnership has been in existence since 1964, and the Partnership Agreement has been recorded with the Santa Clara County Recorder's Office. Vallco Park, Ltd., is a limited partnership, consisting of approximately 17 of the original farming orchardists (and others) who contributed their parcels to the partnership in 1965. Some properties have been purchased by the partnership since that date. The original intent of the partnership was to develop an industrial park with industrial, commercial, office and hotel uses.

2. The report does not indicate that Aqua-Media, located in Vallco Park downstream from I-280, in the process of producing de-ionized water recharges approximately 115,000 gallons per day into the Calabazas Creek, 365 days a year. Perhaps this should be an off-set credit to the potential recharging mentioned on Page 12.

3. The flooding area shown on Figure 4 encompasses lands that are not vacant (Page 15). The Vallco Financial Center and the Four-Phase facility are located in the flood area. Leases are in effect to construct new facilities in the flood area in the immediate future.

4. Costs: Vallco Park has signed an amended agreement and delivered it to the Santa Clara Valley Water District for cost-sharing of this project. Vallco believes that bids will be received at prices that will make it feasible for Vallco to construct the channel as proposed in the "Vallco Alternate" (Alternative No. 6).

   Vallco neither confirms nor disaffirms the cost estimates made by the District engineers for the various alternatives.

5. Stevens Creek Boulevard Culvert: Vallco's understanding is that the District pays all costs of this phase of the project (Page 37, Project Financing, lines 6 and 7).

B. Draft Environmental Impact Report

1. Land Use (Pages 20-27): Vallco Park is a portion of an area designated on the Santa Clara County General Plan, adopted April 25, 1960, as an industrial reserve. The City of Cupertino General Plan, adopted February 26, 1964, committed this entire area for industry, research and development, commercial and office uses. The presently adopted Core Area element of the Cupertino General Plan, adopted June 3, 1974, provides for the mixed uses presently in, and contemplated to be constructed in Vallco Park.

   How this reach of the Calabazas Creek is constructed should have no bearing on land uses or economic impacts.

   The "lead agency" for land use controls in Vallco Park is the City of Cupertino and the present Use Permit for the Vallco Regional Shopping Center requires that Vallco Parkway be extended easterly, crossing the Calabazas Creek, wherever located, to Tantau Avenue, before the Phase II--including the J.C. Penney store of the regional shopping center, now under construction, is opened for business. Opening is scheduled for March 1978.

   New data is available that tends to indicate that nearly all of the mitigating measures that Vallco has the ability and authority to solve at this time, relative to traffic, have been accomplished. It is now clear that the burden of Vallco's traffic on the environment is less than had been estimated in the studies for the Core Area Environmental Impact Report in 1964. Hence, it is logical to assume that the uncommitted lands may soon be removed from that designation. (Pages 22 and 23)

As shown by the attached Exhibit A (Assessor's Map), the right-of-way for the existing creek and/or the Vallco new alignment of the creek is presently owned by Vallco Park, Ltd. and assessed to Vallco Park, Ltd. Vallco Park, Ltd. has waited with growing impatience since 1973 to obtain permission to improve the creek since the District and Vallco Park, Ltd. had entered into an agreement to permit Vallco to realign the creek in a culvert.

It can be argued that any increase in the market value of usuable land, resulting from the Vallco alignment, should be valued at the 1973 prices rather than 1977 prices due to the existence of the prior 1973 agreement, but, in any event, Vallco is not acquiring any "free" land from this project.

2. Flora: The District recently removed all of the flora from Calabazas Creek, north of Homestead Road.

As shown on Table 1 of the Engineer's Report, there have been several large floods in Calabazas Creek and nearly all of them over 1200 CFS have completely removed the flora through the reach of the Creek through Vallco Park. As a matter of fact, the District usually has cranes grabbing the debris from the Creek at each bridge crossing of the Creek. Hence the vast bulk of the present growth in the Creek is expected to be removed, in any cas by the next large flood.

The proposed District Alternative No. 4 would also remove all of the existing riparian habitat.

3. Fauna: The Draft Environmental Impact Report fails to state that with the urbanization around this project, that children and adults periodically shoot and kill wild mammals, that packs of loose dogs have torn living rabbit to shreds, and that with Stevens Creek Boulevard, Vallco Parkway, I-280, Wolfe Road and Tantau Avenue being major thoroughfares, that any wild mammal (coyote, fox, opossum rabbit, raccoon) would have a hard time to survive in a pocket surrounded by intense urbanization.

The Santa Clara County Rodent Control teams have been poisoning the ground squirrels, rats and mice for the past several years to control erosion (from burrows) and to control rabies.

It is believed that there are no longer any small mammals living in the project area.

Any birds in this project area would surely find a better substitute for food, water and cover in the extensively landscaped areas of Vallco Park after completion of the Vallco Alternative #6.

4. Aesthetics: The project area has always been private property and has been posted against trespassing. Hence, no resident or citizen is being denied the "aesthetic experience" of walking along this stretch of the Creek. As a matter of fact, it is quite ugly and is filled with broken concrete, cast-off personal possessions such as auto bodies, chaise lounges, refrigerators, tree trimming and all other sorts of debris. In addition, the erosion control concrete blocks have been painted with graffiti, and there are noxious weeds, grass and tumbleweeds and last, but not least, the banks are subject to periodic caving which has caused several personal injuries.

   Vallco will bring slides to the March 23 hearing showing the "ugliness" of the Calabazas Creek in this project and downstream.

5. Vallco is proud of the fact that it has preserved many of the large specimen trees in Vallco Park, and the large oak tree, near Stevens Creek Blvd., will be protected. Neither alternate should cause it any damage as it is not in any proposed right-of-way.

6. Tantau Overcrossing of I-280: The Water District is reminded that the Department of Transportation for the State of California recently constructed and opened the Tantau Overcrossing of I-280. This was done after advertising in local papers, on a negative declaration. The impact of that project seems to be of more consequence to the environment than the placing of the Calabazas Creek in a culvert by this project.

7. Flood Control: There is a substantial assessed valuation in Vallco Park in property like the office financial center, the regional shopping center and many industrial buildings, including a 500,000 square foot Hewlett-Packard plant. These industries, in addition to their valuable facilities plus costly specialized equipment, require inventories of very high-cost component materials. Vallco Park is one of the larger tax contributors to the County, as well as the Santa Clara Valley Water District. It seems logical that the District can, and should, protect these Vallco properties from most floodings and bank erosion. It surely follows that if by a joint project the District can save $200,000, more or less, then this project should proceed.

Very truly yours,

VALLCO PARK

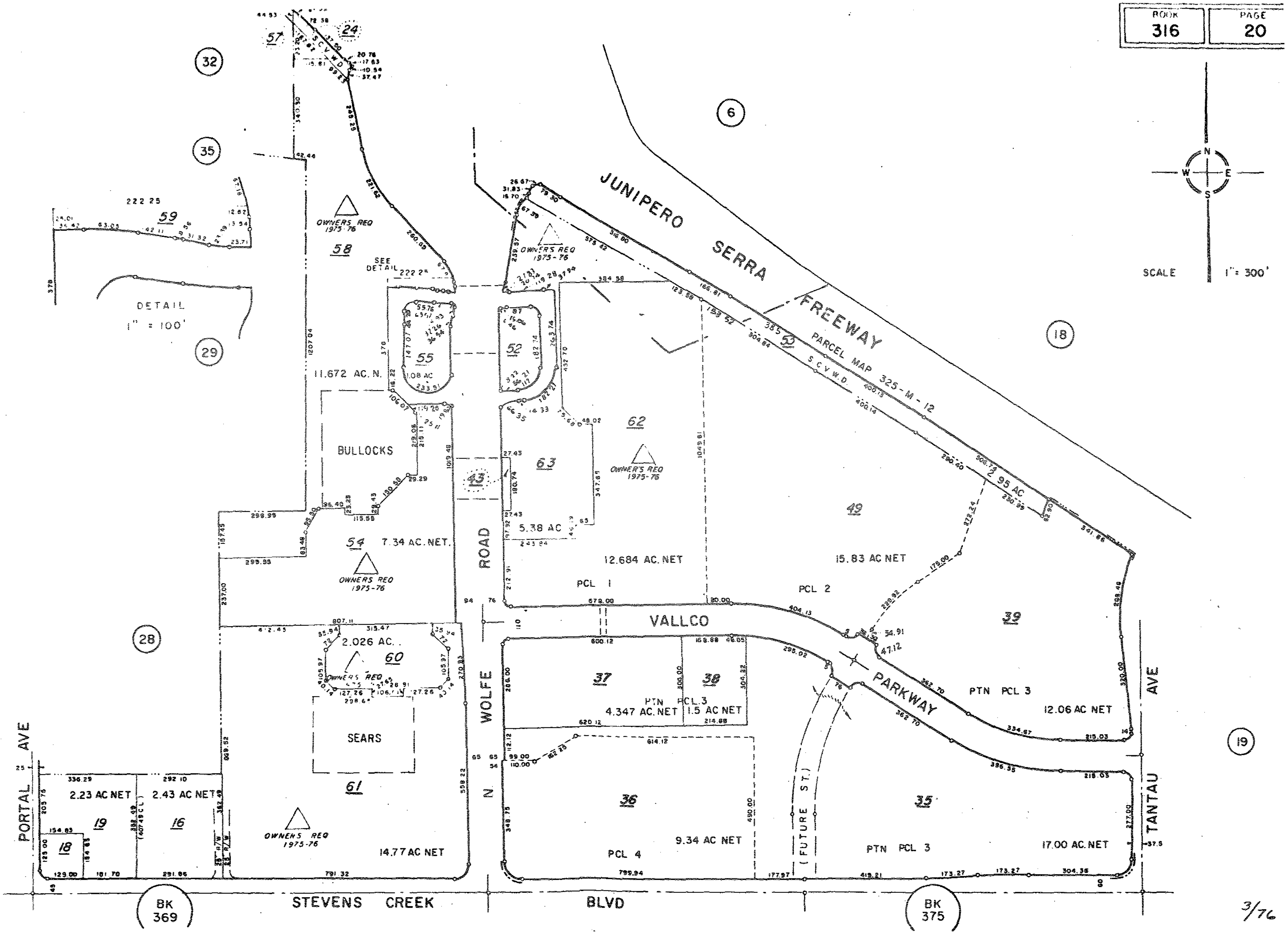
Walter P. Ward
WALTER P. WARD
General Manager

WPW:vp

CC: Robert Quinlan
Bert Viskovich
John Heindel

ENCL: Santa Clara County Assessment Map
Book 316 - Page 20

BOOK 316 PAGE 20



3/76

5 April 1977

STATEMENT OF WALTER P. WARD TO SANTA CLARA VALLEY WATER DISTRICT

SUBJECT: Project No. 2010/Calabazas Creek Improvement

I. Except for a period of military service, the undersigned has been gainfully employed in the area abutting Calabazas Creek, between Stevens Creek Boulevard and Homestead Road, since 1936.

II. The writer has seen the urbanization of the surrounding area during the past 40 years and is of the opinion that the existing Creek, through the project area, has no mimimal or significant value aesthetically and, in fact, in its present condition the Creek is an attractive nuisance as a general dumping ground for unwanted personal property, has been a problem area for juveniles, has been a hot rod track, has been a motorcyclists' playground, and, generally speaking, has been difficult to maintain even though posted with "No Trespassing" signs.

III. Flora: I have probably seen the reach of Creek, through the project area, in a flood probably a dozen times. As shown in the slides presented at the March 23 Hearing, when the Creek is in flood stage nearly every piece of grass, shrub, and all but the larger trees are uprooted by the velocity of the water and either washed down to the bay or are grabbed by the clean-out crews at undercrossings of the roads in the area. My understanding is that if we were given flood protection of any sort and the banks were protected that this work would remove most of the flora that exists. The District Alternate No. 4 would surely remove all the flora. There would be more replacement landscaping from the Vallco culvert which would, of course, remove the existing growth, but the after-appearance of the area would be enhanced by a commercial development properly landscaped over and above the existing eyesore as the Creek exists.

IV. Wildlife: I am a member of the San Jose and Santa Cruz bird clubs and am fairly familiar with the habitats for wild birds. In my opinion there is nothing significant to this reach of the Creek that would effect the lives of any of the birds. I have not seen a four-footed animal for many years, and the last one I observed was a jackrabbit, about 2 years ago, that was being devoured and eaten alive by a pack of 3 dogs. Surely, with the automobile traffic in the area, the poachers, the loose dogs and cats, etc., it would appear inhumane to attempt to maintain a life habitat for any "wild creature". It is also ridiculous, in my opinion, to assume that the District or the property owners should make any contribution to an alternate wildlife habitat inasmuch as this section of the Creek just happens the be the last section in the urban area that is under development.

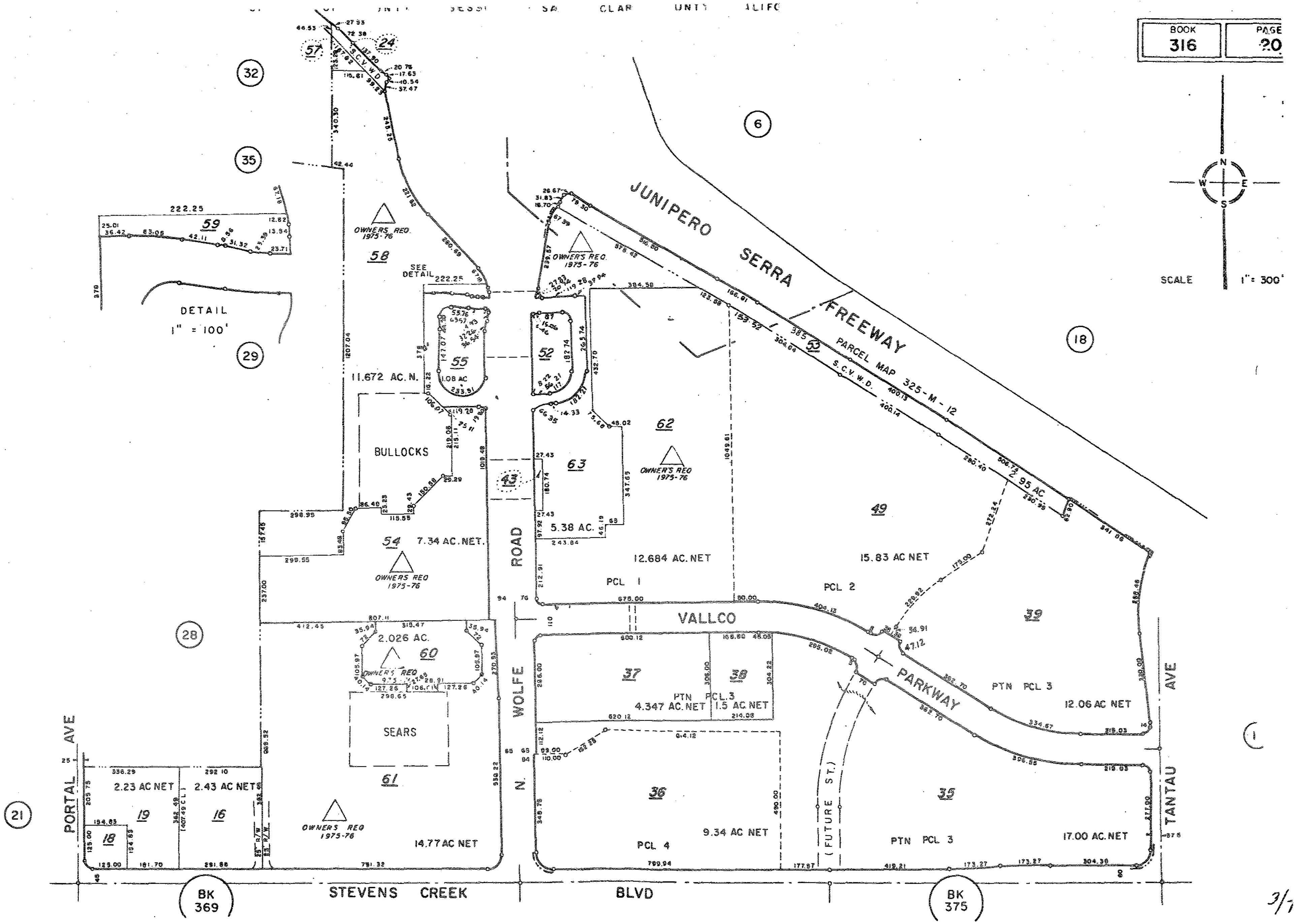
V. General: In recent years, Vallco has had nearly 200 public meetings on hearings for the general plan, zoning, the specific zoning and the use permits for the Vallco development. There have been two court cases testing the sufficiency of the Environmental Impact Reports and the hearing processes. The California Department of Transportation had no request for preparation of an Environmental Impact Report for the Tantau Avenue Overcrossing of I-280, which was given a negative declaration. Inasmuch as Vallco has had a contract with the District for several years to cause this project to be done expeditiously both for Vallco and the District, and inasmuch as the District will benefit from an approximate $200,000 cost savings on the initial project and substantial savings in maintenance, it is my view that the project should be given a "do pass".

Walter P. Ward

VALLCO PARK
BY:

Walter P. Ward
General Manager

BOOK 316 PAGE 20



3/7

70 W. HEDDING ST., EAST WING, SAN JOSE, CALIFORNIA 95110 PHONE 299-2241

TAXES FOR THE FISCAL YEAR JULY 1, 1976 - JUNE 30, 1977

PARCEL NUMBER 316-20-035 DEED NUMBER 3391904

TAX RATE AREA 13-003

PROPERTY ADDRESS CUPERTINO VALLCO 95014 PY

ASSESSEE VALLCO PARK LTD

MARCH 1, 1976

VALUES	LAND	IMPROVEMENTS	PERS. PROPERTY	TOTAL VALUE
FULL CASH	888620	1000		889620
ASSESSED	222155	250		222405

☐ YOUR CANCELLED CHECK IS YOUR BEST RECEIPT. IF YOU REQUIRE THIS BILL RECEIPTED, SEND BILL AND STUB WITH YOUR PAYMENT AND CHECK THIS BOX.

YOUR TAXES WILL BE DISTRIBUTED AS SHOWN	EDUCATION	COUNTY	CITY	DISTRICTS
	14,649.80	6,058.30	531.54	24,505.02

IF YOU HAVE SOLD THIS PROPERTY PLEASE RETURN THIS BILL OR FORWARD TO NEW OWNER.

MAIL TO: (MAY BE TO NEW OWNER OR "CARE OF" ADDRESS)

VALLCO PARK LTD
P O DRAWER V
CUPERTINO CA 95014

	VALUE	TAX RATE PER $100	TAX AMOUNTS
TAX ON TOTAL ASSESSED VALUE	$222,405	$10.785	$23,986.34
TAX ON LAND ONLY VALUE			
TAX ON LAND AND IMPROVEMENT VALUE	$222,405	$.135	$300.24
LESS: HOMEOWNER EXEMPTION			
LESS: OTHER EXEMPTION			
ADD: DIRECT ASSESSMENTS			$21,458.08
TOTAL TAX			$ $45,744.66

SECOND INSTALLMENT	FIRST INSTALLMENT
$ 22,872.33	$ 22,872.33
ADD 6% PENALTY AND $3.00 COST AFTER APRIL 10, 1977	ADD 6% PENALTY AFTER DECEMBER 10, 1976

TAXING AGENCY	TAX RATE PER $100
885 SEWER SERVICE	$194.40
97B VALLCO PARK DIST	$7431.52
97E VALLCO PK ASSESS D	$6020.64
97F VALLCO PK ASSESS D	$7811.52
TOT DIRECT ASSESSMENTS	$21458.08
COUNTY	2.471
COUNTY LIBRARY	.253
CUPERTINO CITY RATE	.239
CUPERTINO UN SCH MAINT	2.106
ELEM OR UNIF SCH BONDS	.183
FREMONT UN H S MAINT	2.135
HIGH SCHOOL BONDS	.132
FOOTHILL COM COLL MAIN	.657
JUNIOR COLLEGE BONDS	.071
AREAWIDE AID-CUPERTINO	1.020
SPEC EDUCATION TAXES	.283
CENTRAL FIRE DIST	.791
MID PENINSULA REG PARK	.100
SCV WATER D-N CENTRAL	.106

TAXING AGENCY	TAX RATE PER $100
SCV WATER D-DISTRICT	.021
BAY AREA AIR POLLUTION	.017
CUPERTINO SANITARY DIS	.166
CUPERTINO SAN DIST-BON	.034
TOT ASSESSED VAL RATE	10.785
SCV WATER D-WATER FUND	.070
SCV WATER D-ZONE W-4	.018
FL CONT-N CENTRAL BOND	.047
TOT LAND & IMPR RATE	.135

PAID
TAX COLLECTOR
DEC 10 1976
COUNTY OF
SANTA CLARA

TEAR ON THIS LINE

SECURED PROPERTY TAX
1976-1977 2

22,872.33 316-20-035-00

SECOND INSTALLMENT PAYMENT STUB
SECOND INSTALLMENT DUE FEB. 1, 1977
ADD 6% PENALTY AND $3.00 COST
IF PAID AFTER 5 P.M. APRIL 10, 1977

0022872333162003500265

0137233300002424766

MAKE CHECKS PAYABLE TO: TAX COLLECTOR, SANTA CLARA COUNTY

MAIL TO: COUNTY GOVERNMENT CENTER,
EAST WING
70 W. HEDDING ST.,
SAN JOSE, CALIFORNIA 95110

TO AVOID PENALTIES MAILED PAYMENTS MUST BE POSTMARKED NOT LATER THAN APRIL 10, 1977

TO PAY TOTAL
BOTH INSTALLMENT
PAYMENT OI

316-20-035

RETURN THIS STUB WITH YOUR SECOND INSTALLMENT PAYMENT

OF: $ 22,872.33

2

W. HEDDING ST., EAST WING SAN JOSE, CALIFORNIA 95110 PHONE 299-2241
TAXES FOR THE FISCAL YEAR JULY 1, 1976 - JUNE 30, 1977

TAX RATE AREA 13-003	PARCEL NUMBER 316-20-039	DEED NUMBER 3391904
	PROPERTY ADDRESS CUPERTINO	VALLCO 95014 PY

ASSESSEE VALLCO PARK LTD
MARCH 1, 1976

VALUES	LAND	IMPROVEMENTS	PERS. PROPERTY	TOTAL VALUE
FULL CASH	630400			630400
ASSESSED	157600			157600

☐ YOUR CANCELLED CHECK IS YOUR BEST RECEIPT. IF YOU REQUIRE THIS BILL RECEIPTED, SEND BILL AND STUB WITH YOUR PAYMENT AND CHECK THIS BOX.

YOUR TAXES WILL BE DISTRIBUTED AS SHOWN	EDUCATION	COUNTY	CITY	DISTRICTS
	10,381.10	4,293.02	376.66	2,159.12

IF YOU HAVE SOLD THIS PROPERTY PLEASE RETURN THIS BILL OR FORWARD TO NEW OWNER.

MAIL TO:
(MAY BE TO NEW OWNER OR "CARE OF" ADDRESS)

VALLCO PARK LTD
P O DRAWER V
CUPERTINO CA 95014

	VALUE	TAX RATE PER $100	TAX AMOUNTS
TAX ON TOTAL ASSESSED VALUE	$157,600	$10.785	$16,997.14
TAX ON LAND ONLY VALUE			
TAX ON LAND AND IMPROVEMENT VALUE	$157,600	$.135	$212.76
LESS: HOMEOWNER EXEMPTION			
LESS: OTHER EXEMPTION			
ADD: DIRECT ASSESSMENTS			

TOTAL TAX $ $17,209.90

SECOND INSTALLMENT	FIRST INSTALLMENT
$ 8,604.95	$ 8,604.95
ADD 6% PENALTY AND $3.00 COST AFTER APRIL 10, 1977	ADD 6% PENALTY AFTER DECEMBER 10, 1976

TAXING AGENCY	TAX RATE PER $100
OUNTY	2.471
OUNTY LIBRARY	.253
UPERTINO CITY RATE	.239
UPERTINO UN SCH MAINT	2.106
LEM OR UNIF SCH BONDS	.183
REMONT UN H S MAINT	2.135
IGH SCHOOL BONDS	.132
OOTHILL COM COLL MAIN	.657
UNIOR COLLEGE BONDS	.071
AREAWIDE AID-CUPERTINO	1.020
SPEC EDUCATION TAXES	.283
ENTRAL FIRE DIST	.791
ITD PENINSULA REG PARK	.100
SCV WATER D-N CENTRAL	.106
SCV WATER D-DISTRICT	.021
BAY AREA AIR POLLUTION	.017
UPERTINO SANITARY DIS	.166
UPERTINO SAN DIST-BON	.034
TOT ASSESSED VAL RATE	10.785
SCV WATER D-WATER FUND	.070

TAXING AGENCY	TAX RATE PER $100
SCV WATER D-ZONE W-4	.018
FL CONT-N CENTRAL BOND	.047
TOT LAND & IMPR RATE	.135

45 PAID 45
TAX COLLECTOR
DEC 10 1976
COUNTY OF SANTA CLARA

TEAR ON THIS LINE

SECURED PROPERTY TAX
1976-1977

8,604.95 316-20-039

SECOND INSTALLMENT PAYMENT STU
SECOND INSTALLMENT DUE FEB. 1, 19
ADD 6% PENALTY AND $3.00 COST
IF PAID AFTER 5 P.M. APRIL 10, 197

00086049531620039002O

005162930000091242

MAKE CHECKS PAYABLE TO: TAX COLLECTOR, SANTA CLARA COUNT

MAIL TO: COUNTY GOVERNMENT CENT
EAST WING
70 W. HEDDING ST.,
SAN JOSE, CALIFORNIA 951

TO AVOID PENALTIES MAILED PAYMENTS MUST BE POSTMARKED NOT LATER THAN APRIL 10, 1977

TO PAY TO
BOTH INSTALL
PAYMEN

316-20-039

RETURN THIS STUB WITH YOU
SECOND INSTALLMENT PAYMENT

OF: $ 8,604.

2

4/4/77-BL

STATEMENT OF BURREL LEONARD

Refuting Some of the Arguments Used by Those Opposing the Boxing of CALABAZAS CREEK in Its Vallco Park Reach

I. PURPOSE OF THIS STATEMENT:

Some of the representations and intimations made by opponents to boxing the creek within Vallco Park are outrageously inaccurate, or distorted, or deceptive, and I wish to set the record straight from personal on-the-site observation and experience over many years.

II. IDENTITY; CREDENTIALS TO COMMENT ON THE ISSUES:

1) My name is BURREL LEONARD. Thru my mother's side of the family I am a descendent of Robert and Margaret Howie Glendenning who bought approximately 200 acres of very raw land in the early 1850s. It now constitutes the approximate northerly half of Vallco Park, lying roughly between Homestead Road, and I-280. The present Calabazas Creek channel is on or near the easterly property line of this original holding.

2) These original purchasers, and many of their several descendents, have resided on or near the property, and have been the active owner-managers since acquisition. The holding has gone thru various land uses on a successive basis, each use---of financial necessity---more intensive than the last use. The land has been the sole or principal source of livelihood to the family.

3) My father bought into this property in 1914, and was its principal manager until his retirement about 1961.

4) The portions of it owned by my maternal grandmother, Margaret Glendenning Burrel (a second Margaret); my mother, Grace Burrel Leonard; my father, John Leonard; and I; were merged into the then newly formed Vallco Park in 1963 as our equity contributions to that venture. Our lands, collectively, represented about one-third of the Vallco total. Again, it was the purpose of the participants in Vallco to use their lands for a livelihood.

5) As the resume shows (attached as Exhibit A), I was born in 1911, and became increasingly active in management of family land holdings, taking over fairly completely when my father retired in 1961. The old Glendenning ranch headquarters was my residence from 1914 thru 1972, at which time the last of several Glendenning-built farmhouses was razed to make way for some further Hewlett-Packard electronic plant development.

6) Point #1: AT THIS TIME THERE IS PROBABLY NO ONE ELSE STILL ALIVE WHO HAS SPENT AS MANY HOURS WALKING, WORKING, OBSERVING, AND MANAGING LANDS IMMEDIATELY ADJACENT TO THE REACH OF CALABAZAS CREEK NOW BEING DISCUSSED. I CERTAINLY HAVE MORE FILE MATERIAL ON THE AREA THAN ANYONE ELSE I KNOW.

III. ORIGINAL REASON FOR CHANNELIZING CALABAZAS WATERS NEAR VALLCO:

1) As I testified at a Water Board hearing in Cupertino on 3/23/76, my great grandfather, who died in 1868, was one of a group of farmers who plowed out a drainage ditch scarcely larger than a head ditch such as is used in flood irrigation practices. The other participants were those owning lands to the east of the Calabazas ditch, and also interested in avoiding random marshy conditions in the spring following each wet winter or late spring storm. The financial motivation is clear: grain crops planted too late in the spring (because of very wet fields) cannot mature seasonably and be harvested before the first likely fall rains. The crops represented the family livelihoods for these owners.

2) Considering both topography, and the agricultural convenience of farming one big field instead of two smaller ones bisected by a drainage ditch, these farmers undertook to "locate" the ditch as near property lines as possible.

3) The ditch, which was originally an excavation perhaps 4' wide and 2' deep, has since washed out to widths of 40' to 100', and depths of 15' to 30'. The loss of land has been in acres.

4) As a child I tagged along with Joseph Glendenning and George W. Glendenning as they tried to build redwood plank wing-dams to reduce the cutting and caving of banks as the gully-cutting progressed.

5) Point #2: CALABAZAS WATERS HAD NO REGULAR CHANNEL NEAR VALLCO BEFORE 1860

IV. LATER CHANNELIZING REGNART GULCH WATERS (Which Usually Joined the Calabazas Flow Slightly Upstream from Vallco Park).

1) A roughly similar situation involving canyon run-off in wet winters, and after heavy storms, is well within the memory of the founders of the City of Cupertino. The random run-off from Regnart Gulch would spew over lower-lying valley lands, the muddy waters having no established or adequate channelization.

The waters eventually joined those from the next canyon south (Pierce Road/Calabazas) in the vicinity of what is now the Vicksburg Avenue, Miller Avenue/or Wolfe intersection. It was the sheet flooding of these combined waters that my forebearers and their neighbors sought to confine by channelization.

2) The parallel of Regnart and Calabazas sheeting, once their waters got out into comparatively flat valley floor, is considerable.

The sheet flooding did not happen very often: maybe two or three times in a particularly wet season; then not at all for several intervening drier years. The duration of each sheet run-off was a few hours, or at most of two days. The months were usually November, December, and January, but very occassionally a little earlier or later. I remember perhaps half a dozen such events near the family home (then located where Hewlett-Packard now has a major picnic groups slightly north of Pruneridge Avenue).

3) When Highway 9 (now called DeAnza Blvd.) was widened from two lanes to four lanes in the late 1950s or early 1960s, the engineers found it necessary to do something decisive about the ragged washed-out ditch on the west side of the road in the vicinity of Kirwin Lane and Bollinger Road. The problem was that of finding a route from Highway 9 to some point near Miller/Wolfe/ Vicksburg/Stevens Creek Blvd. for discharge of Regnart waters into Calabazas waters.

4) The City of Cupertino was incorporated in 1955. I was one of the incorporators. The first large housing tract was built about 1960 by the Oliver Rousseau organization and named "Idlewild". The largest acreage acquired by the builder was about 70 acres bought from a retiring fruit grower, Roy Larsen. He had been plagued for years by the meandering, ill-defined washings of his orchards by occassional Regnart Gulch run-off.

Rousseau agreed to channelize Regnart waters, and just as the farmers did about a century before with their Calabazas problem, the Rousseau engineers arranged to excavate a ditch of convenience to them along the property lines to the greatest extent consistent with the topography. They laid out the ditch and the subdivision to waste the least land, for that was a significant aspect of their livelihood.

I remember that planning process well, for I was then on the Cupertino Planning Commission; had outlined the sheet-flooding problem of the area; and voted affirmatively on their solution. Regnart waters have caused no problems in this area since 1960+-, unless it be by contributing to the acceleration of erosion to the banks of Calabazas within Vallco.

5) Point #3: I FIND IT LUDICROUS WHEN I HEAR AN ENVIRONMENTALIST OVER-REACHING, AND OVER-STATING, AND INTIMATING THAT DRAINAGE DITCHES OF THIS DERIVATION ARE OF GREAT ANTIQUITY, AND BEAUTY, AND A PRICELESS HERITAGE LEFT TO ALL OF US BY THE UNSEEN HAND OF AN ALL-WISE AND BENEVOLENT "NATURE".

It is easy to show that these two ditches were man-made; constructed fairly recently; routed for convenience; and located without reference to flora, or fauna, or groves, or landscaping, or recreation, or beauty.

Such construction was a matter of economic need, or convenience, and of economic analysis. No one seriously regarded these matters as big deals. The projects were not fit subjects for endless PhD theses, like those dealing with the Columbia, or the Colorado, or the Tennessee Rivers. While there is little if any library file on these local matters, there are plenty of present-day personal recollections about the Regnart waters, and in some family memories a fair amount of unpublished history on the Calabazas waters.

V. NO FISH IN CALABAZAS:

1) A big event in the life of a farm boy in a dry country is "the creek coming down", particularly if it does not happen very often. I probably did not miss a single one of these thru the Vallco reach of Calabazas from about 1917 thru about 1970. Heavy rains were sometimes trash movers and gully-washers, and all manner of debris was to be inspected, shot at with sling-shots or better, or grab-hooked out of the water if anything came bobbing by that seemed worth saving.

2) On the occassions when the creek overflowed its banks, it was usually a case of such trash building up on the divider of some bridge. Such bridges were sometimes designed by engineers unfamiliar with the debris, or pre-occupied with cost savings attaching to double culverts with a common wall in the middle.

3) Creeks like this one "come down" with a roar, and "go down" in a couple of days to nothing, leaving a few new banks of silt, a little sand and gravel that rolled a few miles downstream from some gravel strata in the canyon. Usually the new shoals had an assortment of half-buried cans, bottles, old household appliances, abandoned automobile bodies, and such like. Notably missing were fish of any description. In fifty years of looking I have yet to see one in Calabazas.

4) Before the water conservation efforts of the 1920s, and the later Water District importation of Delta water in the 1960s, Calabazas was uniformly bone dry except for the occassion "comings-down" described above.

5) Point #4: A DRAINAGE DITCH THAT IS BONE DRY AN AVERAGE OF MORE THAN 350 DAYS A YEAR FOR OVER 55 YEARS OF OBSERVATION IS NOT A FISH-BEARING WATER COURSE. CALABAZAS HAS BEEN DRY 365 DAYS A YEAR IN MANY YEARS. CALABAZAS DOES NOT HAVE FISH SPAWNING SHOALS. CALABAZAS IS NOT A LEGITIMATE "FISH" AREA IN A "FISH AND GAME" CONTEXT.

A department trying to expand its jurisdiction on as thin a pretext as this one is completely out of line, whatever their reasons on motivations may be.

To argue that if the land owners can be sandbagged into dedicating free land to manufacture a fish-bearing creek in an unsuitable area, then the State can perhaps introduce the water and the fish ..., is to uncover some consitutional issues of confiscation without benefit to the former owners, and without compensation to them. To make such a ditch flow enough to sustain fish, on a year-around basis, would involve a gross mis-use of transported scarce water from somewhere else. Any department recommending such a policy should be accountable to somebody, and should probably be severely reprimanded and disciplined if they are really proposing such nonesense.

VI. EARLY WATER CONSERVATION PRECEPTS IN SANTA CLARA COUNTY:

1) Vallco families have a substantial history in effective water conservation. At present the two individual general partners in Vallco Park are Will Lester and I. Both my father (John Leonard), and Will Lester's father (W. W. Leste were among the dozen or less agriculturalists who finally succeeded in getting a water program passed. It was based on the financial necessity of achieving big results on small dollars, mostly contributed by the agricultural beneficiaries. This is quite a different approach from the environmentalist who clamors for freebies to implement his pet hobbies.

2) Water conservation has been paid for out of property taxes. The ground rules for assessment, and the method of collecting taxes makes it abundantly clear that the farmers needed the water and were willing to pay their way, and have paid their way since day one. The movement was started when the total valley population was perhaps near 300,000 people, somewhat less than half of whom were directly or indirectly engaging in agriculture.

3) The farmers proposed that the muddy run-off of storm water be impounded in the hills around Santa Clara Valley. It was hoped that sites could be found at close to a 400' elevation, or higher. It came to pass.

In a good year about 179,000 acre feet can be held for a time behind eleven earthen dams . (See a typical summary of the "Water Bank" attached as Exhibit B.) This solution depends on area rainfall, and does not rquire expensive works to impound water elsewhere, transport it many miles to here, and then store it in volumes necessary for the now population of perhaps 1.2 million.

4) The proponents were interested in water for irrigating crops. It did not have to be of purest potability. Muddy water would do for step number one, but water heavily contaminated with chemicals or fecal matter would not do. They rejected the idea of a dual system like that at Stanford where one set of lines delivers pollywog water for gardening, and the other set delivers potable water.

5) The agricultural proponents soon found that they could not pass the program on a basis of distributed irrigation ditch water as in the Imperial, San Joaquin, and Sacramento valleys: there were too many powerful interests in veiled but defacto opposition. The political "no-nos" included:

   i) PG&E, who wanted to sell hydro electric power to farmers during the spring irrigation season, offered attractive surplus rates to encourage pumping the underground strata. They objected to any ditch solution.

   ii) The San Jose Water Works , who were jealous of their small lakes in the Santa Cruz mountains, and of their grid of small mains, objected. They wanted a valley-wide monopoly on selling water, much of which was pumped from underground strata. They needed potable water, and the only conservation worth talking about had to add to the underground availability.

   iii) The political jurisdictions responsible for rights-of-way, and for road-building, and bridge-building, were appalled at the thought of a net-work of irrigation canals. They objected.

   iv) The bankers who financed local farmers objected to any solution that grew too costly. Nor could they see any merit in farmers trying to provide at their principal cost abundant water for a million new people to be engaged in everything but agriculture.

6) A viable compromise was found:

   i) Impound the run-off in lakes; let the mud settle out.

   ii) When the water was relatively clean, percolate it into the main strata as directly as possible. It was believed that there is a series of thick, continuous gravel strata---the top one or two recently dried up, but the lower ones still water-bearing. It was believed that one or more of them surfaced in places in the low hills or nearby bench-lands, mostly at elevations like 300-400' (above sea level), but that they dive down fairly sharply toward the middle of the valley bowl. These were believed to have a capacity way in excess of 150-180,000 acre feet impounded in lakes.

   iii) The logical places to try percolation would obviously be directly into these strata wherever they surface. Recharge by ponding is a good solution, if the planners pick the right places in which to pond.

   iv) Old line well-drillers like Fred Holthouse and Art Daley, from long experience in logging wells they drilled, had good reason to believe that they would hit really significant gravel at depths like 75-100' drilling at surface elevations like 200'; maybe gravel at 100-125' if drilling at a site with an elevation near 100'; maybe gravel at 125-150' if drilling near the bottom of the valley at elevations like 50'. When drilling wells of 400'-600' depth, they expected to find perhaps 100' of gravel below the 100' depth, with water standing at 150'+-, and pumping down to 200' +-

v) Obviously the most efficient percolation beds---the ones with immense capacity to absorb and filter dam water----were the ones surfacing near the hills, mostly above the 200' elevation (above sea level). Examples of such beds are those near Campbell, and more recently, those near Kennedy School in Cupertino. A stream course, like Stevens Creek, no doubt percolates significant water into gravel strata like those near Blackberry Farm, but it is doubtful if much percolation takes place thru clay strata overlaying the deeper gravel strata further out in the valley.

7) Point #5: IT DOES NOT FOLLOW THAT THE BOTTOM OF A DITCH OR CREEK IS THE BEST LOCATION FOR PERCOLATION OF WATER RELEASED FROM IMPOUNDED SOURCES.

The bottom of Calabazas thru Vallco is mostly a dense, compact material, with a considerable clay content. Water did not soak down thru it in 1860, and still does not. There are minor surface lenses of sand and gravel, but they seem to be from fairly recent sheet flooding as described for Regnart and Calabazas waters. Such deposits are not very thick, and not very extensive. They are "lenses" which we have found in pouring foundations for buildings in Vallco, and do not appear to connect downward to the strata below. A few hundred gallons seems to fill them, and then the water just stands there, not doing anything to recharge the strata that count.

VII. SURFACE TOPOGRAPHY, AND CONSEQUENCES ON PERCOLATION

1) The prevailing fall of the land in the west valley is from the southwest toward the northeast. Any map will show the many dry drainage ditches and dry creek channels aligned in this manner.

2) A topographic map will show that although the valley floor is close to being a tilted plane, it has a series of long winding gravel ridges on about the same average alignment as the creeks.

3) In between the ridges the heavier soils lie in shallow valleys or swales. Near the Bay a few of these become sloughs. Upland they are dry, and were cultivated and farmed except in rainy seasons. Almost without exception these lower-lying areas are not sandy or gravelly. The soil is usually sediment, or clay, or adobe, or some dense and relatively impervious combination. Usually it seems to have been laid down in layers of various thickness. Near the surface there are occassional lenses of sand or gravel, as though from periodic washes stemming from torrential rains in the hills above. These are the parts of owners' properties where they located drainage ditches, for water runs downhill and there was no location cheaper and easier to use.

4) Point #6: IT IS NOT TO BE PRESUMED THAT THESE SPORADIC SURFACE DEPOSITS OF GRAVEL (within say 30' of the surface) GO DOWN TO THE MAIN STRATA (aquafirs). VARIOUS WELL LOGS TEND TO PROVE FAIRLY CONCLUSIVELY THAT THIS IS NOT TRUE.

5) During the worst of the depression in the nineteen twenties and thirties my father moonlighted from fruit growing by working part-time as a salesman and field engineer for the California Concrete Pipe Company. It was owned by Fred Holthouse (a leading local well-driller), in association with Heinie Shulten and John Demachelli. Their plant and yard was in Sunnyvale for perhaps twenty or thirty years.

In this employment my father surveyed irrigation lines all over the valley floor, checked the machine-dug ditches which had been surveyed to a uniform slope at the bottom, checked on the pipe-laying, and then on

6) Nearly all of these pipe line jobs originated at a new well, or a replacement well, being drilled in concert with the pipe line distribution system for irrigation. Usually my father knew the well drillers, and characteristicall asked all the pertinent questions about strata locations. It would be difficult now to get a comparable practical education in what underlies the surface in our valley, or to what extent water can be expected to percolate in different locations. He certainly looked at miles and miles of work. In some instances I tagged along with him to look at particularly interesting formations, or big well streams. The general thrust of information gathere this way indicates pretty fair uniformity and continuity of formations down 100' or more, but with a lot of variation in the first 50' or so.

7) Based on what I think is fairly good knowledge for a laymen, my father never considered meaningful percolation to mean anything short of getting reasonably potable water into these big main gravel strata, and this in turn means that what counts is below 75-100' in the Vallco area. I don't think the trifling gravel at the present bottom of Calabazas is anything more than a lens, or a small series of lenses.

8) Point #7: THE PEOPLE TALKING ABOUT PERCOLATION IN THE BOTTOM OF CALABAZAS EITHER DON'T SEE THE BIG PICTURE, OR DON'T KNOW THE FORMATIONS WELL ENOUGH TO HAVE A SIGNIFICANT VIEWPOINT, OR HAVE SEIZED ON A COMPARATIVE NIT TO GIVE COLOR TO OBSTRUCTIONIST TACTICS.

VIII. VARMINTS, STRAYED HOUSEHOLD PETS, CARRION EATERS, REPTILES, MARSUPIALS, AND "GAME":

1) I believe it to be fairly common and practical usage to lump rodents like moles, gophers, ground squirrel, prairie dogs, and jack-rabbits into the "varmint" category. Kids shoot at them, but the meat is useless, and the skins and furs are useless.

Occassionally a domesticated strain of hare edges very slightly into the meat category as a hutch-raised food animal, but it is at best a smelly way to send a meddlesome child out back to tend his bunny rabbit.

Such activity usually has more minuses than plusses, and is regarded by neighbors as roughly akin to pigeon-raising with all the splattering and lice.

I don't regard any of the foregoing as "game" in any reasonable sense of the word. An assortment of these has been in Vallco off and on.

2) Unwanted and untended household pets who have gone wild are a nuisance. Whether we talk of dogs or cats, the citizenry usually want them rounded up and exterminated, unless reclaimed at the pound and then suitably confined to quarters by their suddenly aware owners. These abound in Vallco, and everywhere.

3) Two tough survivors who have made the transition from a rural economy to a metropolitan environment are the turkey buzzard and the crow. They soar above it all, and make do with whatever changing habitat comes along. Both are carrion eaters, and not much prized for voice or looks or temperment.

4) Most people are repelled by snakes, or lizards, or toads, despite the occassional extroverted child who wants to show how bold and different he is by having a jar full of something loathsome as a short-time and soon-dead "pet".

5) An occassional marsupial like an oppossum gets caught short and drops a litter in a densly populated area, which usually proves fatal to all of them, and a mess to clean up for whoever owns the site of their demise. This has happened in buildings I have owned a couple of times in fifty years.

None of the foregoing creatures seem to be to be "game". Using the test of whether or not authorities declare open and closed seasons on them, I do not recall "seasons" for any of them.

6) Most farm almanacs have something on "Game Seasons". From the listings they seem to mean a few of the larger edible birds: geese, ducks, pheasants, quail, doves, ...; and most of the horned and hooved animals like moose, elk, deer, antelope. Bears make the list.

The common denominators seem to be the palatability of the meat, and the comparative usefulness of the hide or fur. Food is part of it, and trophy is part of it.

If most of these were ever in Vallco, it must have been before my time.

7) When the Santa Clara Valley had a total population of less than 50,000, and the farmers were broadcasting their seed grain on Monday, expecting to harrow it in on Tuesday, ducks and sometimes geese on their spring flyway, occassionally landed by thousands on Monday evening to eat the fields almost clean of seed grain. This free-lunching produced some mammouth shooting bees as farmers tried to save their seed and their crops. This interlude ended at least 80 or 90 years ago, and the ducks fly somewhere else. Seagulls are something else: they keep warm on the warm macadam of parking lots on days when the Bay water is cold.

8) In the 1930s I watched with a tractor-driver's interest the antics of a couple of hatchings of pheasants. They liked the dense thicket of quince shoots that regularly came up around the trunks of a pear orchard planted on quince root. That orchard got old and was replaced with plums in the 1950s: no more quince shoots for protection; no more pheasants. The last cock lasted about two months, calling incessantly for the hen who did not survive the gun-toting kids and the cats then swarming the orchards.

9) During the nineteen forties and fifties and sixties I planted such comparative "native" shrubs and trees as toyon, heather, madrone, redwood, and Monterey pine. By keeping the stray alley cat population down, and running out the pellet gun kids from the tract housing, I managed to keep a few quail in business around the farm buildings. They occassionally went slumming toward Calabazas, but home was where I threw out the feed and where they could find water around the buildings. They nested in the shrubbery I had planted. When I moved because of progress, the quail disappeared. Now that Hewlett-Packard has fenced out the cats and the kids, some new pair of quail from somewhere may be able to save two or three young birds a year out of their annual covey.

10) There have been a few doves eating weed seed and small rocks off of the compacted parking lot for Penney. When that project is built out, the doves are quite capable of flying considerable distances to where the pickings are as good or better.

11) The last deer I heard of on the property was before my time: about 1908 or 09. I was told by oldsters that a half-grown fawn from somewhere up toward the hills was run down in the back forty hayfield by a pack of wild dogs.

12) Point #8: WHO IN THE FISH AND GAME COMMISSION CAN POSSIBLY THINK THIS TYPE OF TERAIN AND ENVIRONMENT, AND DENSE SURROUNDING POPULATION IS CONDUCIVE TO "GAME"? WITHOUT PROTECTION, HOW CAN THERE BE SURVIVAL? A CONTROLLED ZOO IS ONE THING, BUT AN OUTDOOR SLAUGHTER HOUSE IS ZILCH.

IX. HABITAT - FLORA - FAUNA - LANDSCAPING:

1) Vallco has planted hundreds of trees and shrubs as part of its professionally prepared landscaping plans. The placements of vegetation defines property lines, showcases buildings, and softens the vistas along roadways and driveways, or around parking lots. Care has been taken to provide color, and to provide changing views around the calendar. The choices take into account the soil, the sun, the shade, aesthetics, maintenance costs, and the compatability to the surroundings. No one else in Cupertino, including the school grounds and the grounds surrounding other public buildings has done as much on so large a scale.

2) As a consequence of existing Vallco landscaping, various small non-game birds (particularly those nesting and roosting high up in trees) can probably survive or even thrive in Vallco.

3) Any serious attempt to improve the circumstances of the larger game birds, or of any sizable game animal still indigenous, seems doomed to failure. The only large animals who may find habitat pleasing are the employees and customers. Growth in population is obsoleting everything else down to about mouse size.

4) Point #9: ON BALANCE THERE CAN BE NO QUESTION BUT WHAT VALLCO HAS IMPROVED THE AREA IT CONTROLS IN THE MATTER OF ORNAMENTAL LANDSCAPING. IT IS A REASONABLE AND WORKABLE SUBSTITUTE HABITAT FOR SOME SMALL CREATURES, BUT NOT FOR ALL.

X. THE BIG PICTURE, AND THE CONCLUSION OF REALISTIC "TRADE-OFFS"

1) No perceptive and analytical person who intends to be fair and equitable can still believe that agriculture can continue in this area, unchanged, unsubsidized, and undeviating from the "past" as fancied by some nostalgia buff.

2) If governments are to spend money, then employed citizens and entrepreneurs have to make money, and pay taxes on it. Much of the necessary productivity must stem from new ideas and new combinations of the factors of production.

3) The often-held fetish of retaining everything old, even though it was garbage way back when, and still is, can lead our analysis astray. Change there has been, and change there will be, and Vallco's performance is one of carefully considered and reasonably enlightened change.

4) The operations in Vallco have produced at least $100 million a year of new payroll, and at least $100,000 a month of new real estate taxes, and at least one-half million a year of new sales taxes (which go to support the City) The development has paid for more and better local roads than all other government agencies combined, excepting only the combination that built I-280. ..... so in the process half a mile of drainage ditch is boxed....: So what?

Burrel Leonard

5) Point #10: IT IS TIME TO QUIT WALLOWING AROUND WORRYING ABOUT THE NITS, ... AND THE INFINITESMALS, ... AND THE IMPONDERABLES,... AND TO SEE THE BIG PICTURE FOR WHAT IT IS. ON A NET BASIS VALLCO IS GOOD FOR THE COMMUNITY

EXHIBIT "A"

3/20/75-BL

RESUME - BURREL LEONARD

AGE: Born San Jose 1/12/11 Local resident throughout. Age 64

EDUCATION: Local public schools. Stanford University. AB 1931
Some graduate work in accounting and economics)
Did some instructing in accounting) 1932-39

BUSINESS: Principal in family owned and operated business engaging in fruit growing and processing. 1927-73 Firm operated under name John Leonard. Plant manager from 1940; general manager from 1950 Property merged into Vallco at its hub.

Mortgage banking experience as part-time manger of Northern California office of Ralph C. Sutro Co. 1958-66 Office originated about $50 million in loans. Operation was run from the packing plant property. Later removed to S.F.

Director of Orchard Supply, a San Jose hardware firm started as a farm co-op about 1930 and converted to corporation about 1958. Annual volume now about $ 21 million. 1956 to date

Founding general partner of Vallco Park, Ltd. President 1964 to date

LAND PLANNING AND DEVELOPMENT:

Involved in various land use issues under County 1950-55

Involved in the incorporation of Cupertino as a City 1954-55

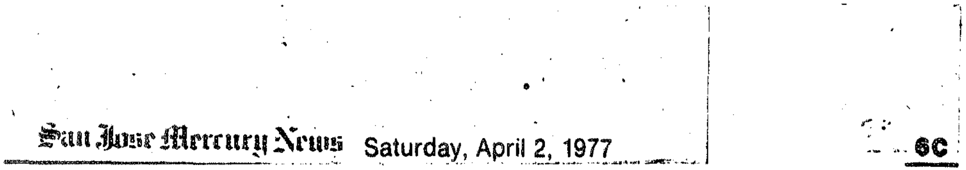
Involved in the formation of the Cupertino Sanitary District 1954-58

Involved in the routing of I-#280 (freeway) thru Cupertino, and in obtaining the Wolfe Road interchange 1955-65

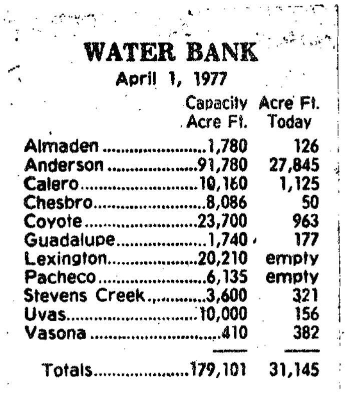
Member Cupertino Planning Commission in formative period of City 1955-63. Chairman 11/55-4/57; 4/58-4/59; 4/60-4/61

Cupertino Man of Year 1963

EXHIBIT "B"



San Jose Mercury News Saturday, April 2, 1977 6C



WATER BANK

April 1, 1977

	Capacity Acre Ft.	Acre Ft. Today
Almaden	1,780	126
Anderson	91,780	27,845
Calero	10,160	1,125
Chesbro	8,086	50
Coyote	23,700	963
Guadalupe	1,740	177
Lexington	20,210	empty
Pacheco	6,135	empty
Stevens Creek	3,600	321
Uvas	10,000	156
Vasona	410	382
Totals	179,101	31,145

LESTER & LESTER *Grower of Choice Santa Clara Valley Fruits Since 1883*

10050 NORTH WOLFE ROAD
AT STEVENS CREEK BLVD.
SW2-ROOM 106
CUPERTINO, CA. 95014
PHONE [408] 253-3933

April 4, 1977

Mr. George Korbay
Santa Clara Valley Water District
5750 Almaden Expressway
San Jose, California 95118

RE: PROPOSED CALABAZAS CREEK FLOOD CONTROL CHANNEL

Dear Mr. Korbay:

I have carefully read the Draft Environmental Impact report of the Calabazas Creek, and have listened to testimony at public hearings, and have read several respondent letters published by various individuals relative to the above local drainage channel. I believe it is time to set the record straight on several pertinent points, and this statement can be considered as an affidavit, and to be a true and accurate account to the best of my knowledge, and one to which I will enter into as sworn testimony should the occasion be necessary.

I have lived in the Santa Clara Valley all of my life (60 years) except such time as I spent at the University of California at Davis, or in the armed services during World War II. I resided on Saratoga Avenue, Santa Clara, most of my younger years. As you know the San Tomas Aquino Creek flowed through my parents ranch. In those years, prior to the war, we considered it quite normal for it to reach flood stage and overflow its banks and into the surrounding orchards and fields. During those years, prior to the extensive development of subdivisions, the over-flowing did no great harm, except when considerable debris, channel growth, logs, etc. lodged against local bridges and occasionally washed them out or washed around them. The channels, too, were relatively narrow and shallow, and as soon as the storm passed the San Tomas Aquino Creek would soon dry up. This pattern was essentially true also on the Penetencia Creek, the Silver Creek, the Wildcat Creek, the Saratoga Creek, and the Calabazas Creek, on all of which my parents had property located at one time or another. In other words, the Santa Clara Valley consists of a graben, and the valley floor was built up to its present levels with these streams fanning out into alluvial fans and depositing the alluvium downstream, with only the finer portions reaching the bay. Of course toward the central portion of the valley the alluvium is naturally of finer material and deposition of buildup occurs very slowly. Compaction of these clayey, fine particles to a dense, non-pervious material is in actuallity what has happened, especially as one gets in the flatter flood plains, and thus very little ground water recharge occurs in the lower reaches of most of these streams.

In the late 1940's and early 1950's due to an extensive influx of immigration, and the building of subdivisions in the county, the "flash flooding" became even more evident and intensive, due to street water run-off, and thus very rapid erosion occured, undercutting and widening those long established local drainage ditches, many of which had been maintained and cleaned out by the farmers, whose land was contiguous to the channels for decades before.

Rebuilding channels, bridges, roads and rehabilitating flood victims were no longer an individual's problem, but they became county wide problems. The Santa Clara Valley Flood Control and Water District, after extensive study, divided the valley into several Flood Control bonding districts, and the tax payers took it upon themselves to construct "erosion proof" and "flood-proof" channels to contain these flash floods that devasted everything in their wake. Thus, on the west side of the valley, approximately 9 - 10 miles of the San Tomas Aquino Creek was placed in a concrete lined channel, several miles of which were placed in an underground box. Much of the Saratoga, the Stevens, and the Calabazas Creeks were treated likewise; said improvements generally commencing at the lower reaches where large volumns of water caused extensive silting, flooding and erosion and gradually working up stream to a point where the smaller flows could be controlled, and where flows coming into the upper reaches of the streambed were more constant and underground percolation occured.

In the late 1940's and early 1950's, we acquired an extensive agricultural holding in the approximate vicinity of the Calabazas Creek. This gave me an even closer familiarity with this channel. Soon after we personally farmed both sides of the channel from Stevens Creek Blvd. to the City limits of Santa Clara. The ranch we acquired in the early 1950's straddled both sides of what is now Wolfe Road. There were many years during which it was impossible to spray the lower portions of this ranch because of extensive ponding of rain water. Several years we were able to accomplish winter spraying by piping in the spray material via portable high pressure pipes. However, not many years after, the State of California purchased the I-280 R/W, the Calabazas flood drainage channel was constructed and the problem essentially was solved. However, even after the Calabazas flood control channel was constructed, we still experienced extensive ponding problems on a ranch we owned just southerly of Homestead Road and Quail Street. In 1965 this problem was solved by the construction of a large street drainage culvert along Homestead Road.

Under a privately financed Local Improvement District, a portion of the channel was straightened out and relocated into an engineered curvilinear native soil channel, Circa 1965. This channel now has been badly eroded, not during the greater floods of 1955 and 1958, but in drainage runoff subsequent to 1965. In fact it no longer takes a so-called "flood" to cause severe erosion in this area due to the nearly vertical undercut banks. (Please note series of photos taken this date.)

These nearly vertical walls are so unstable that the expansive and contractive qualities of the loam soil during the wet and dry seasons will result in massive vertical cracks developing and whole sections of the creek sides will sluff off and fall to the bottom. As this creek is continually subject to trespassing by children, there is no doubt in my mind that soon an unsuspecting child's life will be snuffed out by one of these land slides. Of course at each one of these occurances, the creek channel is that much larger. At present it is quite different than the mere swampy drainage channel that was plowed out by farmers over a hundred years ago. Certainly drastic corrections are in order for this reach of the creek, as has already been done to other reaches of the surrounding valley streams.

In reading the E.I.R. much ado seems to be made about the animals living along the creek. In my many excursions up and down the creek the only wild animals (other than two-legged) that I have observed is the pesky ground squirrel. Being traditionally a farmer, I think I know by experience that perhaps the fruit farmers worst enemies (other than insects) are the crow and the ground squirrel. It is difficult to raise any crops where either or both are present. But because crops are now essentially out of the picture in this highly urbanized environment, both are soon bound to migrate or be poisoned off. Thus we are cooperating very extensively with the County Rodent Vector Control Agency, not necessarily to preserve what few crops remain, but to control erosion along the stream banks. We have constantly undermining rodents present, many of which have proven to be rabid. Thus we spend many hours and considerable funds annually for control along this reach.

In addition I would like to refute the idea that there is considerable percolation of waters into the underground aquifers of this reach. I do not believe there are any extensive continuous underground aquifers in this reach of the creek. It is true that when the Water District does run water down the creek from the South Bay Aqueduct, when it is available at certain times of the year, a certain amount of water seems to disappear. This happens during the warm, breezy days, especially in the afternoons. This I contend is water loss due to evaporation and brush absorption, and not percolation, for I have noticed that during the night and early mornings, just as much water reaches the lower portions of the reach (near Tantau Avenue) as that what is introduced at the Stevens Creek Road bridge. I have observed this phenomen many times, and the under ground clays, once saturated are incapable of percolating but little additional water. Perhaps what little water that is "apparently" percolated is absorbed by the weeds and grasses growing in the creek bottom.

In conclusion, I contend that

(1) drastic measure must be taken to eleviate the severe erosion and flooding problems along this reach of the Calabazas Creek, including the control of ground squirrels.

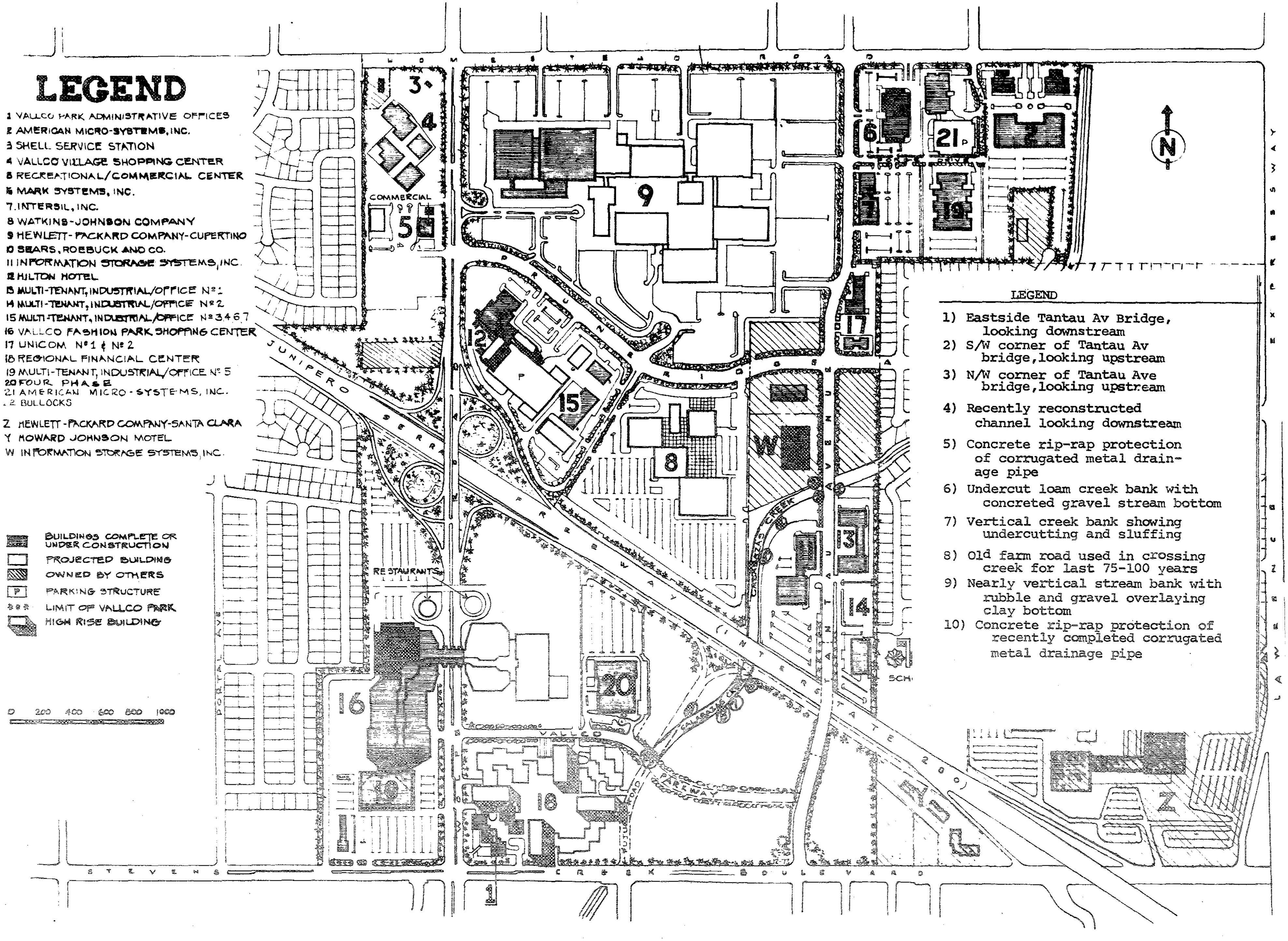
(2) Public agencies must take the lead in eliminating potential hazards to life, limb and property, both during the short flooding periods and during the long dry periods.

(3) That there is very little, if any, percolation to the ground water charging system in this reach.

(4) That whatever flora there is, it is mostly of the high water consuming type and of no indiguous quality. Unslightly tumble weeds use prodigious amounts of water, have no soil stabilization qualities, and are a hazard during the first or second wind storm that occurs.

Sincerely yours,

Will W. Lester


LEGEND
1 VALLCO PARK ADMINISTRATIVE OFFICES
2 AMERICAN MICRO-SYSTEMS, INC.
3 SHELL SERVICE STATION
4 VALLCO VILLAGE SHOPPING CENTER
5 RECREATIONAL/COMMERCIAL CENTER
6 MARK SYSTEMS, INC.
7. INTERSIL, INC.
8 WATKINS-JOHNSON COMPANY
9 HEWLETT-PACKARD COMPANY-CUPERTINO
10 SEARS, ROEBUCK AND CO.
11 INFORMATION STORAGE SYSTEMS, INC.
12 HILTON HOTEL
13 MULTI-TENANT, INDUSTRIAL/OFFICE Nº 1
14 MULTI-TENANT, INDUSTRIAL/OFFICE Nº 2
15 MULTI-TENANT, INDUSTRIAL/OFFICE Nº 3 4 6 7
16 VALLCO FASHION PARK SHOPPING CENTER
17 UNICOM Nº 1 & Nº 2
18 REGIONAL FINANCIAL CENTER
19 MULTI-TENANT, INDUSTRIAL/OFFICE Nº 5
20 FOUR PHASE
21 AMERICAN MICRO-SYSTEMS, INC.
22 BULLOCKS
Z HEWLETT-PACKARD COMPANY-SANTA CLARA
Y HOWARD JOHNSON MOTEL
W INFORMATION STORAGE SYSTEMS, INC.
▨ BUILDINGS COMPLETE OR UNDER CONSTRUCTION
☐ PROJECTED BUILDING
▨ OWNED BY OTHERS
P PARKING STRUCTURE
*** LIMIT OF VALLCO PARK
HIGH RISE BUILDING
0 200 400 600 800 1000
LEGEND
1) Eastside Tantau Av Bridge, looking downstream
2) S/W corner of Tantau Av bridge, looking upstream
3) N/W corner of Tantau Ave bridge, looking upstream
4) Recently reconstructed channel looking downstream
5) Concrete rip-rap protection of corrugated metal drainage pipe
6) Undercut loam creek bank with concreted gravel stream bottom
7) Vertical creek bank showing undercutting and sluffing
8) Old farm road used in crossing creek for last 75-100 years
9) Nearly vertical stream bank with rubble and gravel overlaying clay bottom
10) Concrete rip-rap protection of recently completed corrugated metal drainage pipe
HOMESTEAD ROAD
STEVENS CREEK BOULEVARD
JUNIPERO SERRA FREEWAY
INTERSTATE 280
TANTAU AVENUE
PRUNERIDGE
VALLCO PARKWAY
CALABAZAS CREEK
LAWRENCE EXPRESSWAY
PORTAL AVE
FUTURE ROAD
COMMERCIAL
RESTAURANTS
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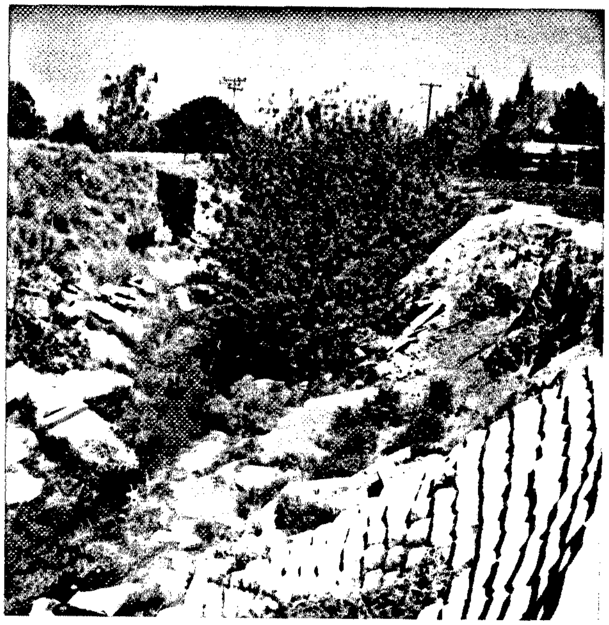
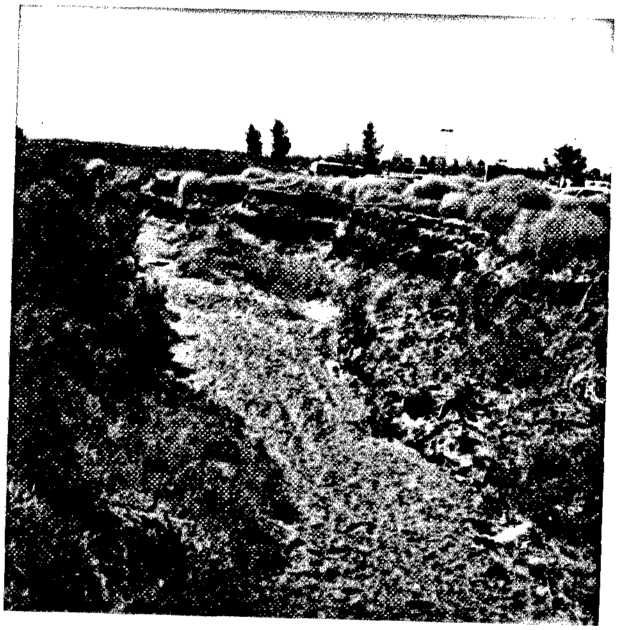
Scene #1



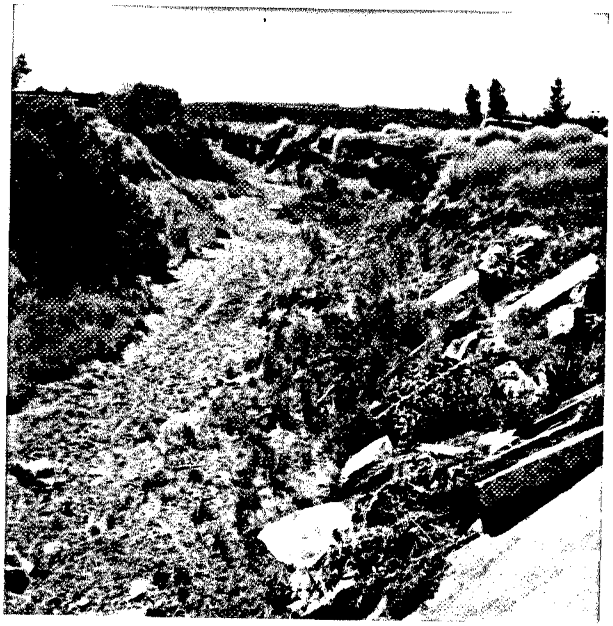
View from the Tantau Avenue bridge showing the down stream portion of Calabazas Creek. Note extensive erosion after the stream leaves the concrete rip-rap. Concrete rubble was placed on the creek banks by the County in an effort to control erosion. Small amount of water in creek bottom came from street storm drains.

Scene #2



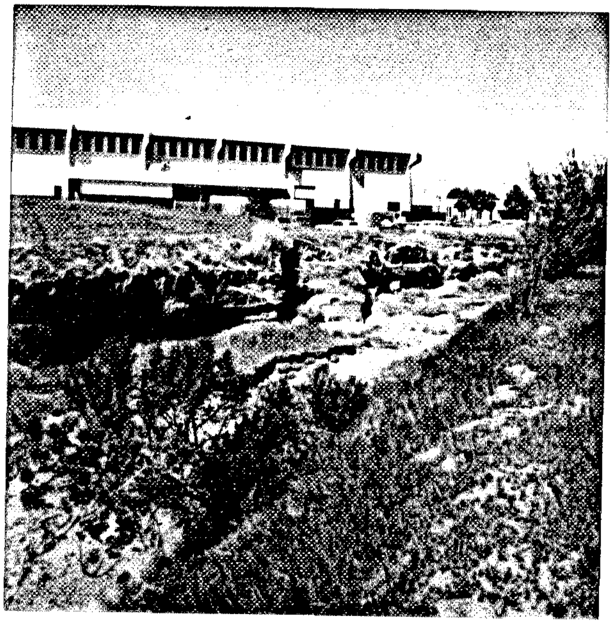
View of Calabazas Creek taken from west side of the Tantau Ave bridge showing extensive erosion taking place on an annual basis along the recently engineered, and relocated stream bed. Gravel in the bottom of the stream bed overlays hard compacted native clays and concreted impervious gravel

Scene # 3



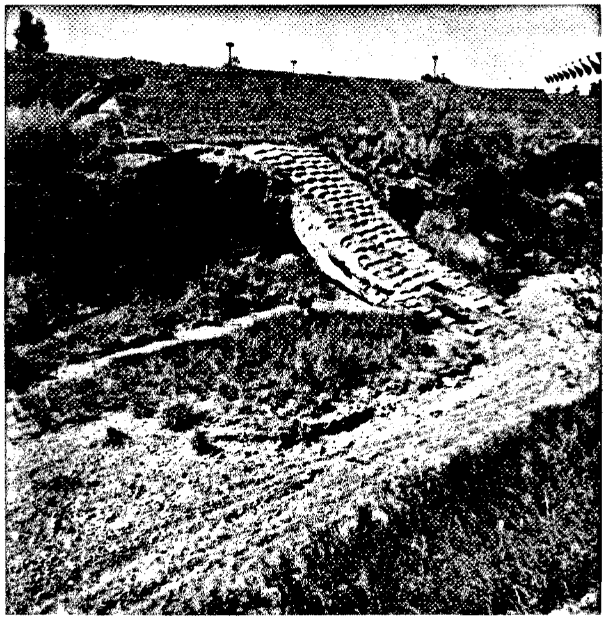
Scene looking up stream from the Tantau Ave bridge, showing concrete rubble placed along the banks in an attempt to control erosion. Note the very extensive upstream erosion along this newly relocated and engineered stream channel. Gravel in stream bed rests on top of a compacted clay hard-pan type of formation.

Scene #4



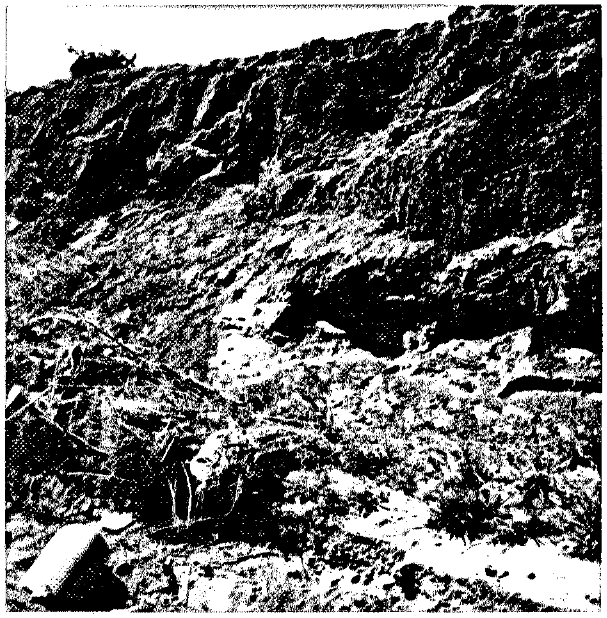
Scene looking downstream approximately midway between the I-280 bridge and the Tantau Ave bridge. This stream bed is a portion of the relocated, engineered stream channel. Extensive erosion has occured in this reach even though the then trapazoidal channel was completed in 1965-1966. The shrubs on the foreground bank is chapparal and greasewood.

Scene #5



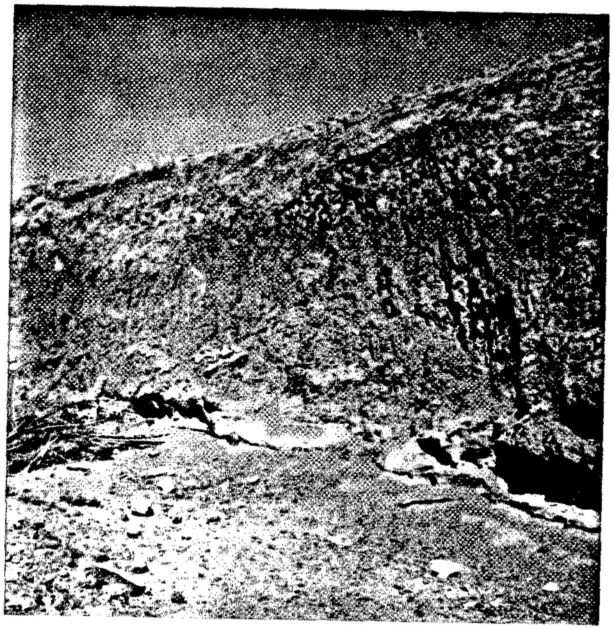
Channel slightly upstream from the previous scene. The concrete rip-rap embankment protects a corrugated steel drain pipe. When placed in the creek channel, the rip-rap followed the trapazoidal engineered channel. Note how erosion has nearly washed the entire rip-rap away. No doubt the next large storm will wash the entire structure down-stream, perhaps lodging against the Tantau Ave bridge, causing a major catastrophe and flooding in that area.

Scene #6



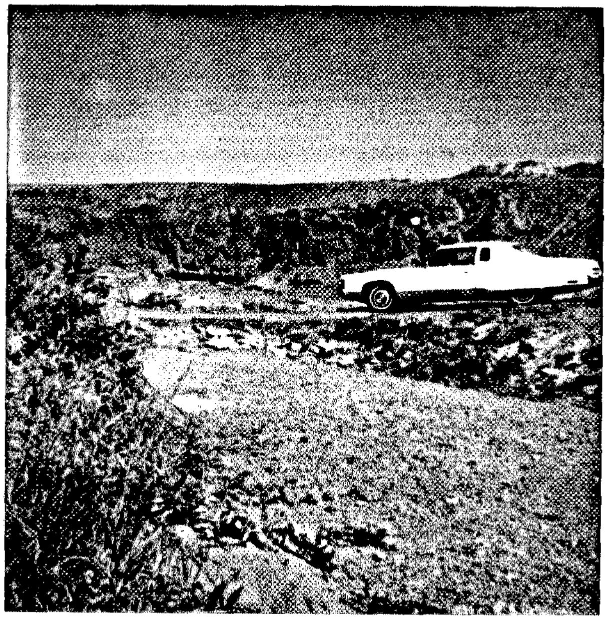
Channel slightly up stream from the I-280 bridge. Note the severe undercutting of the banks, causing nearly vertical cliffs. Debris and trash are continually washed down the creek from above. Note in the lower portion of the picture the concretous nature of gravels. Under these gravel lenses lie nearly impervious compacted clays.

Scene # 7



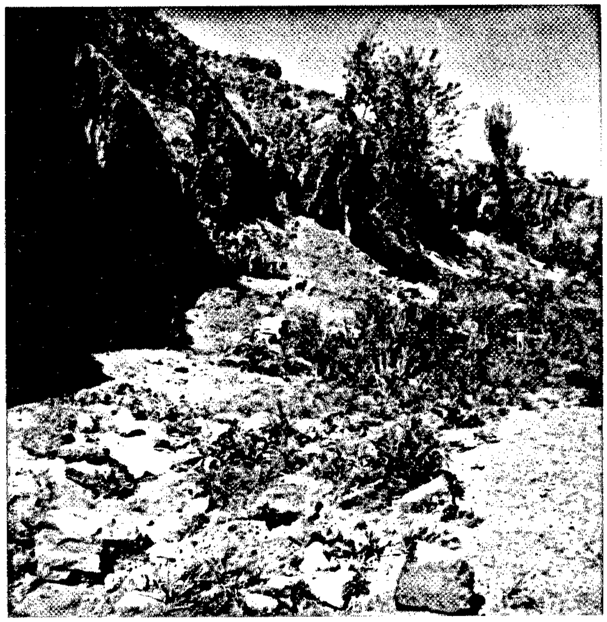
Channel slightly upstream from Scene 6, showing extensive erosion, vertical banks that continually sluff off and cave into the stream channel as the clay-loam expands and contracts during the annual wetting and drying process.

Scene #8



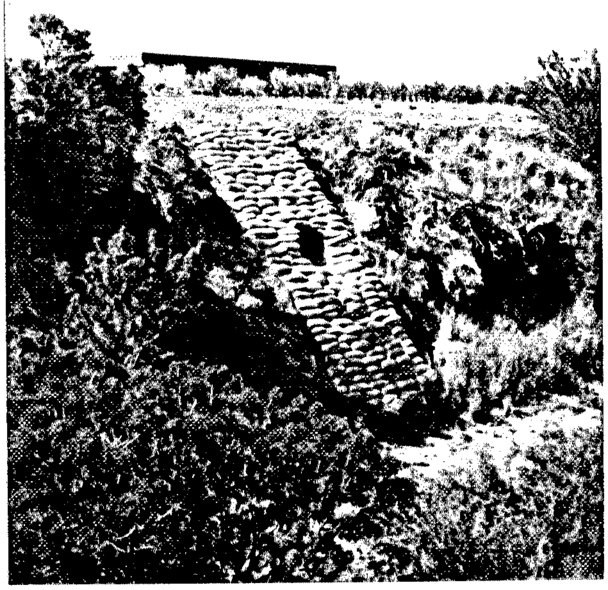
Channel approximately 300-ft up-stream from the previous scene. This farm road crossing has probably been in use 75 to 100 years. Several years back it could barely be negociated with a tractor. However, at this time it is easily crossed by a motor car due to the extensive widening and erosion of the creek.

Scene # 9



Channel upstream from scene #8 showing severe erosion and under cutting taking place. The shrubs in the back ground are remanents of the old tree root stock from the now removed orchard --Myrobalen plum.

Scene #10



Newly placed drainage pipe (1976) that already shows severe side erosion and under cutting.

Without a doubt the next storm will cause severe erosion around this structure causing it to slip down into the channel, or lodge against some down stream structure.

[illegible]

VVE w/A
GSK " 4/5
LCF "

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100 BUSH STREET
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NORMAN MACLEOD

GEORGE A. POOLE, JR.
COUNSEL

April 4, 1977

Board of Directors
Santa Clara Valley Water District
5750 Almaden Expressway
San Jose, CA 95118

Re: Draft EIR, Calabazas Creek Project

Gentlemen:

We have been asked, as counsel for Vallco Park, Ltd., to respond to the contentions presented to you in the letters from Jake Miller on behalf of the Sierra Club.

We have reviewed the draft Environmental Impact Report, and while we are not in complete agreement with all aspects of the report, we are satisfied that it is a carefully and properly prepared document and that it meets the requirements of Sections 21100 and 21100.1 of the Public Resources Code.

With respect to the letter, we would first like to clear the air of the innuendo or suggestion that Vallco Park, Ltd. is some kind of a corporate monster or that it is unconcerned with the land or the environment or that it is somehow being subsidized by the public through the proposed project.

Vallco Park, Ltd. is the owner of the land in question, including the bed of Calabazas Creek, in fee simple absolute. It is a partnership composed in major part of those ranchers and their families who have lived upon the land and farmed it, commencing with the first settlement of the Santa Clara Valley, and ending at the time that the encroachments of urban development and increased taxation made it impossible to continue farming. All of the planning, building and management has been and now is personally done and supervised by partners who are former ranchers.

As owner in fee simple of the land which is master planned and zoned and substantially improved for its contemplated uses and which has for many years been taxed without reduction on account of Calabazas Creek, Vallco Park has a vested legal right to the land and its use, including Calabazas Creek, and it will not be "subsidized" in any manner whatsoever by being permitted to develop or use its own land.

The entire Vallco Park project is a model modern, well planned, landscaped, aesthetically attractive, clean and wholly desirable light industrial and commercial development, and it has been acclaimed as such both nationally and internationally.

We know of nothing improper in connection with the fact that Vallco Park will receive some "benefits" of the transaction. As a member of the public, and as a taxpayer within the District, it is entitled to benefit from flood control measures just as are other property owners, members of the public and governmental entities. In addition, under the agreements relating to the project, Vallco Park has agreed to provide the interest in land and very substantial funds needed to complete the project. The entire added cost of alternative no. 6 is to be borne by Vallco Park. The additional argument that the project is undesirable because Vallco Park will save the cost of a bridge is specious. It would be simply wasteful of both public and private funds to require construction of a bridge which would have to be acquired by the District and destroyed at such time as the District is able to go forward with a project.

The Sierra Club complains that there is no public benefit to alternative no. 6. But there is public benefit in obtaining a more efficient, low maintenance, installation, which will eliminate public health and safety problems which have arisen in connection with the present open ditch. There will be further public benefit from favorable economic factors resulting from improvement of this land, including important additional employment opportunities for citizens of the area and increased tax revenues to the taxing entities.

The Sierra Club apparently misapprehends the facts when it seems to suggest that there is a flow of native water through the ditch amounting to an acre foot per day. The only ponding is of waste water at the Stevens Creek Boulevard culvert, and there is no flow of water through the ditch during 11 or more months out of the year. The ditch is, in fact, normally dry, and any recharging of ground water would necessarily be dependent upon imported water. Furthermore, the ground in question bottoms on a dense clay strata and does not allow any substantial percolation. The only loss of natural percolation would occur during periods of flooding when the entire surrounding area is wet.

As to wildlife habitat, the area in question is for a number of miles surrounded entirely by highways, business properties, and residential developments. The bed of the ditch is normally dry and there are no fish nor is there any marine life at all except at the culvert. The vegetation along the reach consists of weeds and scrub trees. The ditch is not a natural watercourse but was created by the Vallco ranchers and their ancestors in connection with their farming activities and as a drainage ditch for floodwaters. In the event the project does not go forward, it will become necessary for the District to clean the weeds and vegetation out of downstream culverts during periods of flooding. The bed of the ditch has been the subject of repeated trespasses and criminal activities and it is frequently used as a garbage dump. Based upon prior experience, the few jackrabbits which may be in the area will soon become victims of roving dogs or trespassing shooters. The area is in no sense a "natural stream" nor is it a significant "wildlife habitat" as suggested by the Sierra Club.

The other complaints of the Sierra Club involve demands that the report recite statutes or ordinances, etc., all of which are unnecessary to recite, and their inclusion would merely burden the writers and the readers. Your Board does not need to be told what its own policies are. Nor should it be intimidated by suggestions that the Sierra Club will call in officials from Sacramento if the decision is not satisfactory to them.

We submit that the draft report is proper, that it should be accepted and that alternative no. 6 is the most desirable alternative taking into consideration the true facts bearing upon the environmental and economic effects of the project. We enclose additional statements from knowledgeable and interested parties, and other documents, and we refer to the record in support of those points made above.

Sincerely,

Peter L. Townsend

PLT/rg

encl. Santa Clara County Assessor Tax Map Book 316, Page 20
1976-77 Tax bill 316-20-035
1976-77 Tax bill 316-20-039
Statements:
- Burrel Leonard
- Bill Kishimoto
- Walter Ward
- Will W. Lester
- Mrs. Catherine M. Feidler

GSK 4/4
LCF

EIR

725 Cowper St.
Palo Alto, Ca 94301
April 2, 1977

Board of Directors
Santa Clara Valley Water District
5750 Almaden Expressway
San Jose, Ca 95118

Re: agenda April 5; EIR for Calabazas Creek

Members of the Board:

I respectfully request that the Board extend the public comment period for as long a time as is required by the State for its review process. My main reason for asking is so that the Environmental Advisory Committee can have an opportunity to review the EIR and make a recommendation. I believe that this should be one of the functions of this Committee.

I am pleased that the EIR was sent to the State for review, particularly since the Department of Fish and Game has jurisdiction by law(1601 notification), as do the Department of Water Resources and the State Water Resources Control Board (waste of water, Decision 1460). You will need to notify the Department of Fish and Game before any further planning for this Creek can occur.

Again, I recommend that you consider an alternative that preserves the existing beneficial uses of the state's waters in the creek for wildlife habitat, groundwater recharge and recreation (passive in order to contrast with urban monotony). This action is required by Section 21002.1 of the Public Resources Code. The alternative is reshaping of the creek, so as to correct erosion, with creation of gently sloping or stepped side slopes that support riparian vegetation and allow safe public enjoyment from the banks of whatever development is ultimately built. An improved earth channel will maintain the existing beneficial uses of the public waters of the state, and would enhance whatever development is designed around it. I note that the Stanford Shopping Center is adjacent to San Francisquito Creek, an even steeper creek, and that the shopping center and the creek have co-existed successfully for many years.

Attached for your information is a legal analysis of the CEQA requirements, excerpted from the March 18 EIR Monitor. It states very clearly the substantive requirements of the law to adopt alternatives that minimize environmental damage. It also notes that the legal and environmental staffs of public agencies will have "become more involved with preventive law under CEQA". I certainly hope that you will be getting input and recommendations from your legal and environmental staff.

This Board should also take notice of the fact that Calabazas Creek is now a natural watercourse, having served as such for almost 130 years. This is settled law in this State (see e.g. San Gabriel Valley Counry Club vs County of Los Angeles, 182 C 392, 397). All of the low flows entering the stream from the storm drains become public waters of the state once in the channel (see e.g. Water Code Sect.1202; Allen vs Calif. Water and Tel. Co., 29 C(2d) 466, 482). All of the streamwaters are the property of the people of the state (Water Code Sect. 102), the state is the holder of legal title as trustee for the benefit of the people (Ivanhoe Irrig. Dist. v. All Parties 47 C(2d) 597) , and the state's right to control these waters is paramount (Water Code Sect. 104, 105). The state has an easement in behalf of the people for a right-of-way through their natural channels for public streamwaters, and it is settled law of California that the land through which the watercourse passes has always been burdened with a drainage servitude(see e.g. O'Hara vs L.A. Co. Flood Control Dist. 19 C(2d) 61). The public's right to the benefits of its waters is to the point, not ownership or title to the bed (Day vs Armstrong 362 P(2d) 137; People vs Mack 19 CA(3d) 1040).

Sincerely,
Mary Anne Mock

2 Enclosures

Mar 18, 1977

Sect 21002 (Publ Res Code)

> ..."public agencies should ~~not~~ not approve projects as proposed if there are feasible alternatives or feasible mitigation measures available which would substantially lessen the significant environmental effects of such projects..."

This is reinforced in Section 21002.1 as follows:

> "The following policies shall apply to the use of environmental impact reports prepared pursuant to the provisions of this division:
>
> ...
>
> (b) Each public agency shall mitigate or avoid the significant effects on the environment of projects it approves or carries out whenever it is feasible to do so."

These two policy sections are implemented by a findings requirement in Section 21081. This section provides:

> "No public agency shall approve or carry out a project for which an environmental impact report has been completed which identifies one or more significant effects thereof unless such public agency makes one or more of the following findings:..."

The findings are (a) that changes have been made in the project to mitigate or avoid the significant environmental effects, (b) that another agency has the authority to make those changes or, (c) that the changes are not feasible due to specific economic, social or other considerations. The findings in this section are made subject to judicial review by Sections 21168 and 21168.5. Accordingly, the

Encl 1

findings must be supported by substantial evidence in the record.

These new policy sections combined with the findings requirement raise the question of whether CEQA has established a substantive duty to protect the environment. The language can be interpreted to create a duty to avoid adverse environmental effects where it is feasible to avoid them. It could be claimed, however, that the bill merely created a new procedural requirement to make a finding on the feasibility of suggested alternatives or mitigation measures. This appears, however, to be more than merely a procedural requirement. If the agency finds that mitigation measures are feasible, the agency would appear to be required by law to implement those mitigation measures.

There are genuine consequences which flow from the finding on feasibility. When the agency finds that a change in the project is feasible, and will prevent substantial environmental damage, the law requires the agency to take action. Action like this was never clearly required before. Further, even where an agency determines that the mitigation measures are infeasible, the finding must be supported by substantial evidence in the record. Where there is substantial evidence supporting either a finding of feasibility or of infeasibility, the agency would be free to make whichever finding it believes to be correct. Where the evidence would not support alternative findings, however, the agency's choice and action would be controlled by law by the information before it. This is a great change from the previous requirements that merely spelled out procedural steps which the agency had to take in terms of public disclosure before it could approve a course of action.

Even under the old standards, however, an agency did not have unbridled discretion in reachinga decision. For example, in Elizabeth Burger v. County of Mendocino, the court of appeals invalidated a project approved as arbitrary and capricious because the action was contrary to all the information before the agency. The recent amendments to CEQA appear to be an expansion of that ruling.

It appears that the addition of this substantive requirement will lead to a change in the pattern of litigation under CEQA. In the past, Challenges have centered on the failure of the public agency to prepare an EIR and on whether the EIR was adequate. Due to the changes in the contents of EIRs required by AB 2679, litigants may encounter more difficulty in challenging EIRs on the basis of adequacy. The EIRs will be focused on the significant effects of the project and will be able to dismiss the other effects with a checkmark and perhaps a comment on a check list. This change will reduce the number of potential targets for challenge in terms of adequacy. Further, the courts have appeared more willing to uphold EIRs on the basis of adequacy. For example, see San Francisco Ecology Center v. City and County of San Francisco, 48 C.A. 3d 584 (1975). If there appears to be a good faith effort at full disclosure, the court will probably uphold the adequacy of the EIR.

In the future, the focus of CEQA litigation will probably shift to the issue of whether the findings required by Section 21081 were made correctly and whether they were supported by substantial evidence in the record. Litigants will now be able to challenge the decision made by the public agency rather than merely on the procedures used in getting to the decision. This is where the main concern in CEQA litigation has always been, but the attack has been limited to procedural issues.

This new opportunity for litigation will require public agency attorneys to practice additional preventive law. Policy making bodies will need careful guidance in making decisions. It will be necessary to make sure that the findings are made, that statements of fact are prepared to support the findings and that the findings are supported by substantial evidence in the record.

The new substantive requirement may also lead to a change in the pattern of comments on EIRs. Previously, comments on EIRs have focused on deficiencies in the discussion of impacts. The question for reviewers has often been, "can I think of impacts which were overlooked in the EIR?" The effort has been to force the lead agency to analyze those overlooked impacts when it prepares responses to the comments.

As a result of the new policy sections and the findings requirement, comments in the future will probably focus on feasible alternatives and mitigation measures. If these measures are dismissed as infeasible in the EIR, the reviewers may suggest revisions that would make the measures feasible. Further, the reviewers may propose alternatives or mitigation measures that were not discussed in the EIR and try to show that these measures are feasible. If a reviewer wants a public agency to adopt a particular alternative or mitigation measure, he would show that the change would substantially reduce environmental damage and that the change is feasible. Once he makes this showing, the lead agency would be forced to follow his suggestion and incorporate it into the project unless the lead agency can find that the measure would not be feasible. This finding again would have to be based on substantial evidence. As a result, the changes in the law have given reviewers a greater ability to influence the actionsof the lead agency.

In summary, it appears as if the changes in the CEQA law and the guidelines will result in important changes in the contents of EIRs, in the ways in which the public is involved in the process, and in the ways in which public agencies handle projects which are subject to CEQA. The changes will focus the process more on the important issues which are before the public agency for decision. The agencies will be required to protect the environment where it is feasible to do so. Further, the agencies will be forced to explain the reasons that lead them to their decisions, and those reasons will have to be supported by substantial evidence in the record. Court challenges to projects will be focused on the basic decisions made by the agencies rather than on procedural defects as in the past. These changes will require attorneys for public agencies to become more involved with preventive law under CEQA

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Memorandum

To : State Water Resources Control Board
P. O. Box 100
Sacramento, CA 95801

Attention: Jill B. Dunlap
Legal Counsel

Date : JAN 28 1976

File No.:

Subject: Dry Creek Canyon
Hearing

Orig. to W. Rights
Copies ✓Board
✓Legal
✓Atlis

From : **Department of Water Resources**

This memorandum amplifies testimony presented by the Department of Water Resources at the State Water Resources Control Board's hearing on November 12, 1975, on the question of whether the diversion of low flows from South Fork Dry Canyon by the Los Angeles County Flood Control District in operation of its Dry Canyon Flood Control Project constitutes an unreasonable diversion of water.

1/28/7
kh

Our position, then as now, is that a diversion of water ostensibly for flood control purposes should be limited to those purposes and should not include return flows from urban uses which would otherwise flow into South Fork Dry Canyon and sustain trees or other riparian vegetation and wildlife.

The position taken by the Department is based upon the constitutional requirement (Article XIV, Section 3) that the water resources of the State be put to beneficial use to the fullest extent of which they are capable and that the right to use or control water does not extend to the unreasonable diversion of water. The court in Environmental Defense Fund, Inc. v. East Bay Municipal Utility District, 52 Cal.App. 3d 828 (1975) determined that the constitutional protection of the water resources of the State includes preservation of environment.

We believe that the court decision emphasizes the propriety of a determination by the Board, if it finds that a diversion of all flows will result in loss of trees or other riparian vegetation, or other environmental damage, that such a diversion is unreasonable unless the flood control facilities are modified to allow low flows to go down the natural channel of South Fork Dry Creek.

Ronald B. Robie

Ronald B. Robie
Director

Encl 2

1 April 1977

SANTA CLARA VALLEY WATER DISTRICT
5750 Almaden Expressway
San Jose, CA. 95118

REF: Calabazas Creek

Gentlemen:

My name is Bill Kishimoto and I have lived in the vicinity of Calabazas Creek, near Homestead Road, since 1910. My residence since 1958 has been at 990 Lawrence Expressway, Santa Clara.

I have observed several floods of the Calabazas Creek in the area of Vallco Park since 1910, and have noted that in each instance the flood waters have carried the plants, shrubs and trees downstream, tending to clog the culverts under the major streets and thoroughfares.

In my judgment, the stream runs 15 to 20 days on an average per year, carrying away the flood waters that drain into the drainage channel. I used to help gather gravel in the creek in the early days and I can affirm that the gravel strata that are exposed in the area of Vallco Park are in extremely thin layers and there is very little percolation into the lower strata because of the heavy clay formations in that vicinity.

Years ago, there were a few opossums, jackrabbits, and quite a few Valley quail living near the stream. Presently there is a group of about 8 quail in one of Vallco's landscaped areas, but I have not seen any quail in the creek bottom. To the best of my recollection I have not seen any of the smaller animals in or near the creek for the past three or four years.

I work for Vallco Park in maintaining the remaining orchard areas and I can attest to the fact that the present creek is an eyesore and a dumping ground for all kinds of debris. I have called the Sheriff's Office on numerous occasions to chase away kids smoking pot, children and adults with firearms shooting at the birds and squirrels, and to remove motorcyclists and other trespassers.

In my judgment, the present creek is an eyesore to the community and contributes very little to the percolation of water into the lower strata.

Sincerely,
Bill M. Kishimoto

BILL KISHIMOTO

990 Lawrence Expressway
Santa Clara, CA. 95051

(Mrs. Catherine Feidler (
Co-owner of
TRI-CITIES OFFICE EQUIPMENT CO.

3650 EL CAMINO REAL
K-MART SHOPPING CENTER
SANTA CLARA, CA. 95051
(408) 296-7300

To Whom It May Concern, Apr. 4, 1977

As a homeowner living in Santa Clara on Calabazas Creek at 611 Hubbard ave. I wish to state some facts why I believe our creek should be improved with a closed culvert in Vallco Park and the above ground put to good use.

FACT (1) I have 7 children who have always been forbidden to go into the creek as it is a hazard in every way.

Some Hazards
(a) poor creekbed full of rock x debris
(b) dope addicts & pot smokers (check Santa Cla Police records
(c) Sexual deviates (also Police records)
(d) 1 suicide in creek by ISS a few years ago
(e) only living things a few snakes and many rats - no descent wildlife or fish in past 17y (which + die in our yards after being poisoned by County bait-traps)
(f) loitering place for students from Cupertino High Scho

FACT (2) We have lived in this same home 17 years and believe our property values can only impro as the grounds around us improve. The Cree behind x between Westwood Oaks subdivision also needs repairs x improvements.

FACT (3) Four of my neighbors have been contacted and also agree with me we need these improvements - WASCO'S - AIBERT'S - MARTINSON'S - FEIDLER'S. All live on Hubbard ave x Shasta Dr in Santa Clara of these past many years.

If I can be of further help. Please contact me.

Mrs. Catherine M. Feidler
611 Hubbard ave
Santa Clara

RESPONSE TO THE ARMY CORPS OF ENGINEERS

a. The revised project will not interfere with groundwater recharge.

b. The revised project, with an excavated earth channel at the downstream end, will now allow floodwaters to return to the creek.

c. The construction specifications will require that the contractor not allow turbidity in the downstream reach to exceed certain accepted standards. Also, all flows will be directed down the existing channel during construction of the project on the "off-stream" alignment. Only the tie-in work at both ends will temporarily affect the live stream.

d. Please see response No. 3 to State Department of Conservation.

RESPONSE TO DEPARTMENT OF WATER RESOURCES

The summary of the Final EIR has been integrated into the expanded summary for the Final Engineer's Report. Thus, one summary now serves both reports.

RESPONSE TO STATE DEPARTMENT OF CONSERVATION

1. The hydrologic regime of Calabazas Creek upstream and downstream of the proposed project would remain essentially unchanged from present conditions. This is true for both the previous box culvert alternative and the new alternative (1/2 box culvert - 1/2 earth channel). Both alternatives were carefully designed to prevent an increase in erosive velocities by using appropriate entrance transitions, bottom slopes, and energy dissipators. The plan attached to the Draft Engineer's Report is a general plan and is not intended to be a detailed construction plan. Therefore, some of the specific hydraulic featurs may not be shown.

The final proposed project is designed to control downstream velocities by using an appropriate drop in the bottom of the box culvert reach and by using a widened box culvert for a portion of this reach. A carefully designed warped transition will be used between the box culvert and the earth channel reaches.

2. The flooding problem, including the effect of a one percent flood not being able to pass through the Stevens Creek Boulevard culvert, is described on page 16 of the final Engineer's Report under the heading of "Description of Flood Problem". The same information was described on page 14 of the draft report; however, it was not as easy to find as it was included under "Design Flood". The final report now covers the flooding problem more clearly.

3. There will not be an increase in the erosion downstream for the reasons discussed in our answer to question No. 1 above.

RESPONSE TO STATE DEPARTMENT OF PARKS AND RECREATION

1. A previous search of archaeological site records demonstrated that the sensitivity of this area is low.

2. The construction specifications will include a clause stating that in the event archaeological artifacts are unearthed during construction, all work on the site will cease and the District will be notified by the contractor. The District will consult with a qualified archaeologist before proceeding further.

environ
2551 MERCED STREET, SAN LEANDRO
CALIFORNIA 94577 483-2481

DRAFT ENVIRONMENTAL IMPACT REPORT

PROPOSED FLOOD AND EROSION CONTROL MEASURES FOR
CALABAZAS CREEK
INTERSTATE 280 TO STEVENS CREEK BOULEVARD
NORTH CENTRAL ZONE PROJECT NO. 2010

February 1977

Santa Clara Valley Water District

JOHN T. O'HALLORAN
GENERAL MANAGER

LLOYD C. FOWLER
CHIEF ENGINEER

DISTRICT BOARD OF DIRECTORS

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Maurice E. Dullea, Vice Chairman	District 4		

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SUMMARY

The proposed project is the enlargement and undergrounding of the existing reach of Calabazas Creek which runs through Vallco Park between Interstate Highway 280 and Stevens Creek Boulevard in the City of Cupertino. Specifically, the proposed project consists of a buried double-cell concrete box culvert, the reconstruction of the inadequate culvert under Stevens Creek Boulevard, and the filling of the existing creek channel.

The beneficial impacts which will result from the project include:

1. Prevention of flooding (up to the one percent flood flows) which could be caused by the inadequate capacity of the Stevens Creek Boulevard culvert.
2. Elimination of bank failure, erosion, and downstream sedimentation.
3. Conversion of the open creek channel to developable land.
4. Removal of the open channel as an impediment to future vehicular and pedestrian circulation.

The major adverse impacts include:

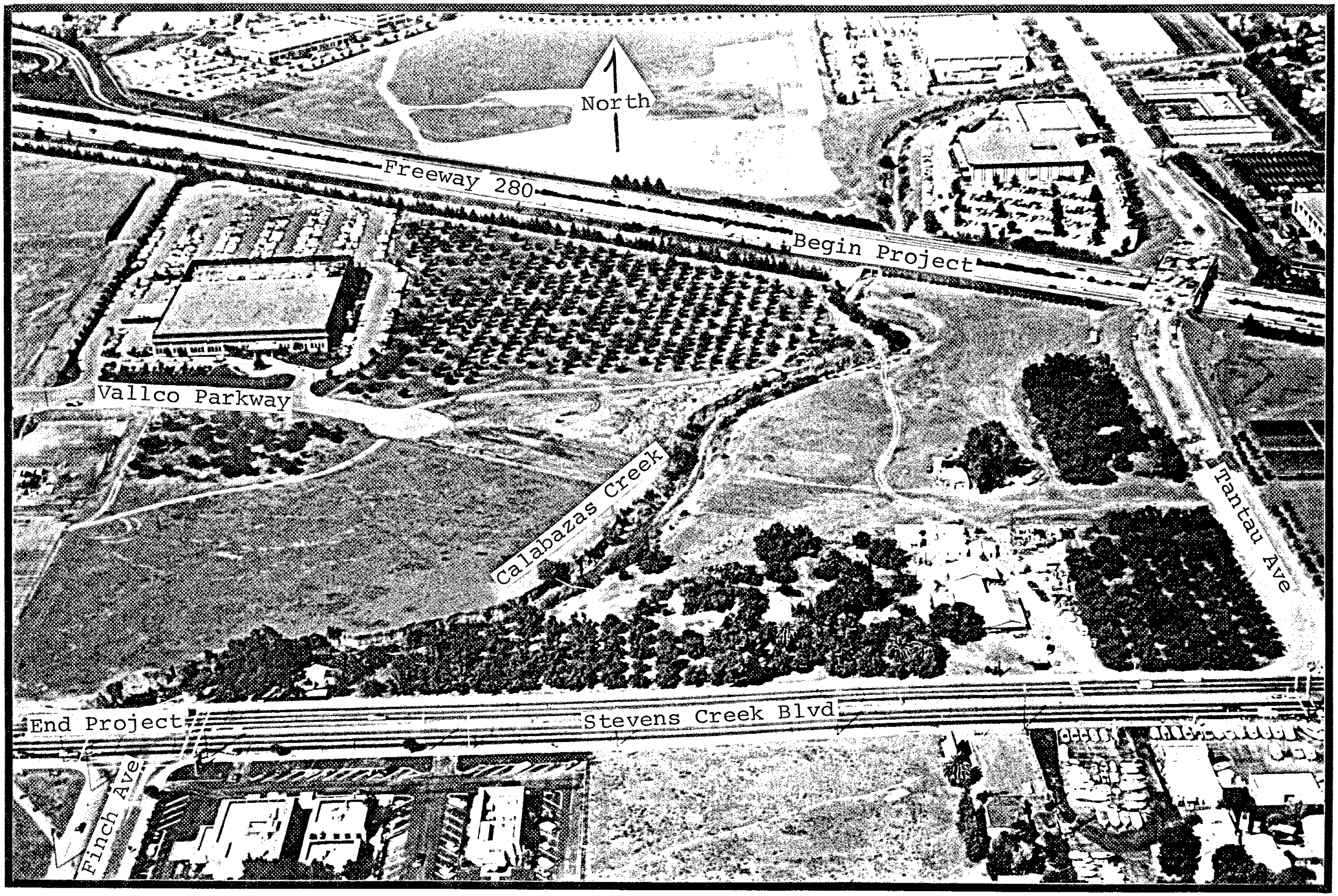
1. Obliteration of a ground water recharge area.
2. Destruction of riparian habitat and the wildlife supported by it.
3. Interruption of a riparian corridor affording protected circulation for wildlife.

4. Loss of an open space element with its greenery and seasonal running stream.

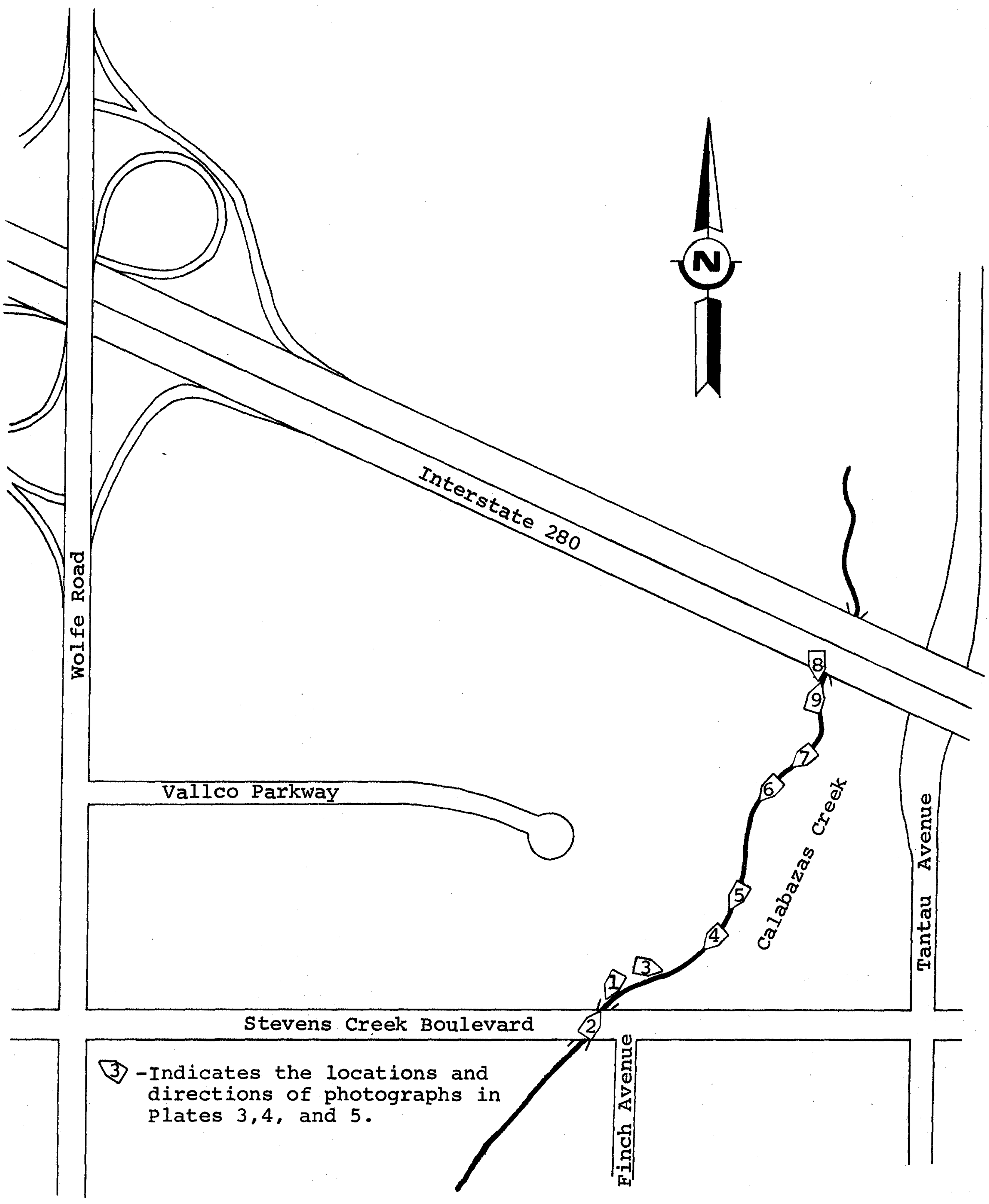
This report examines mitigation measures which might offset the adverse impacts. A central proposal is the creation of a ground water recharge area coupled with selected riparian vegetation to meet the needs of recharge, visual delight, and ecosystem replacement. Other specific mitigation measures are offered in appropriate sections of this report.

The Initial Study identifying impacts is attached as Appendix A.

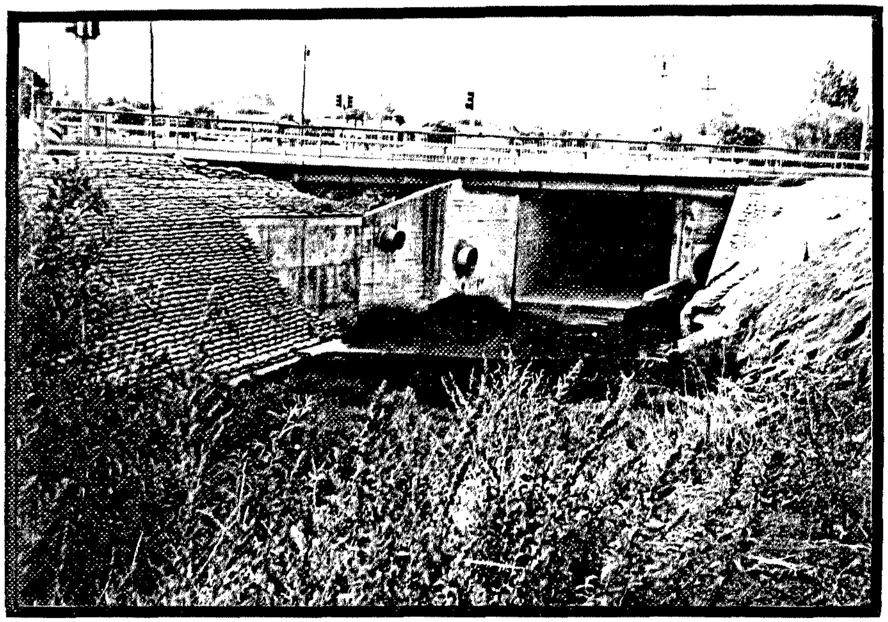
PLATE 1



Aerial photograph showing the project area, taken October 4, 1976. This view looks north.



PHOTOGRAPH LOCATIONS

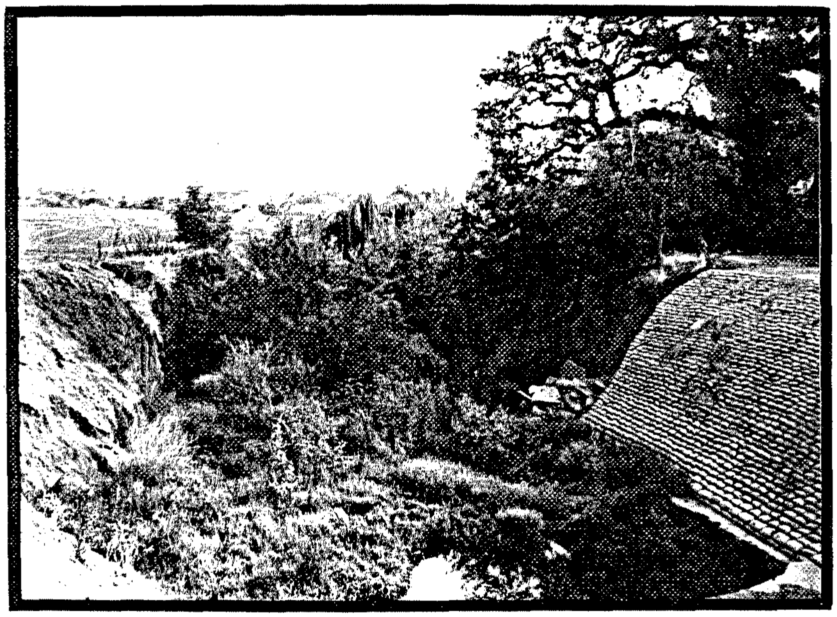


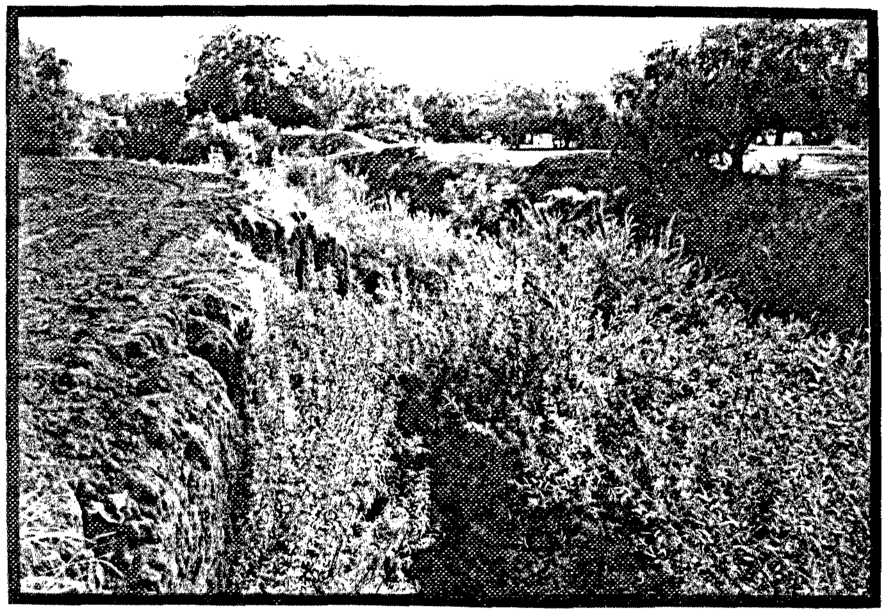
1

Stevens Creek Boulevard culvert looking upstream.

2

Calabazas Creek looking downstream from the Stevens Creek Boulevard bridge. Note the large oak (right) near the top of bank.





3

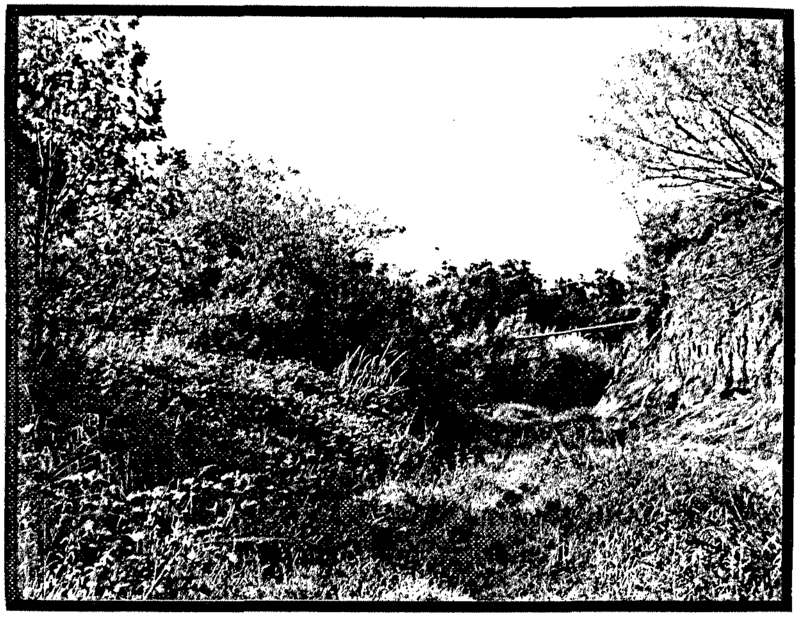
Looking downstream. Note dense willow growth in the channel bottom and steep side slopes (left).

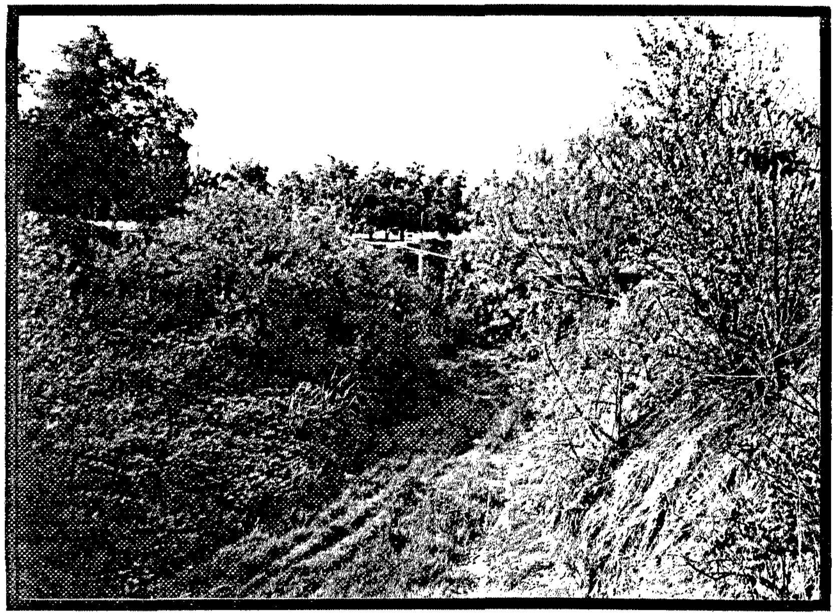
PHOTOGRAPHS OF EXISTING CREEK

PLATE 3

4

Looking upstream from the channel bottom. This view shows riparian habitat reestablishing. Young sycamore (left), willows and blackberry vines cover this part of the east slope.



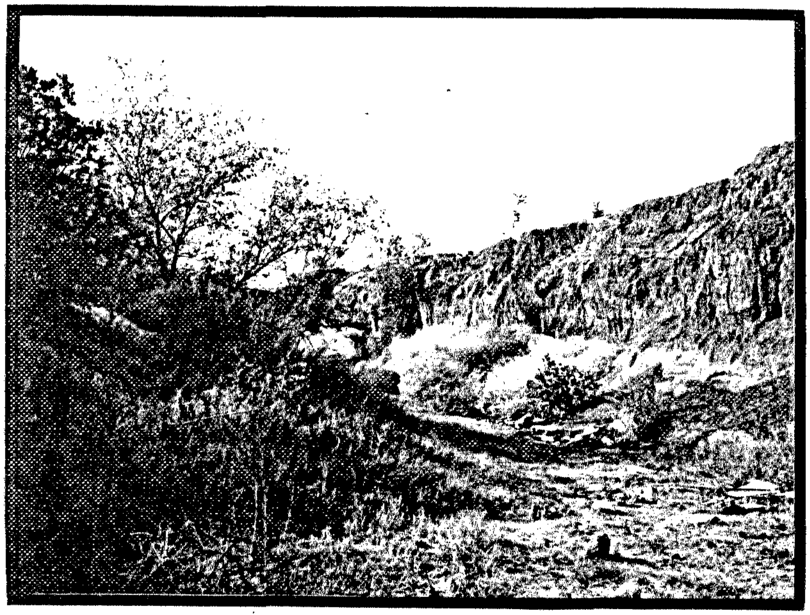


5

Taken looking upstream from the west slope. Note the dense foliage which has developed on the east slope.

6

Taken looking upstream from the channel bottom. This view shows the difference between the east (left) and the badly eroded west channel slopes.



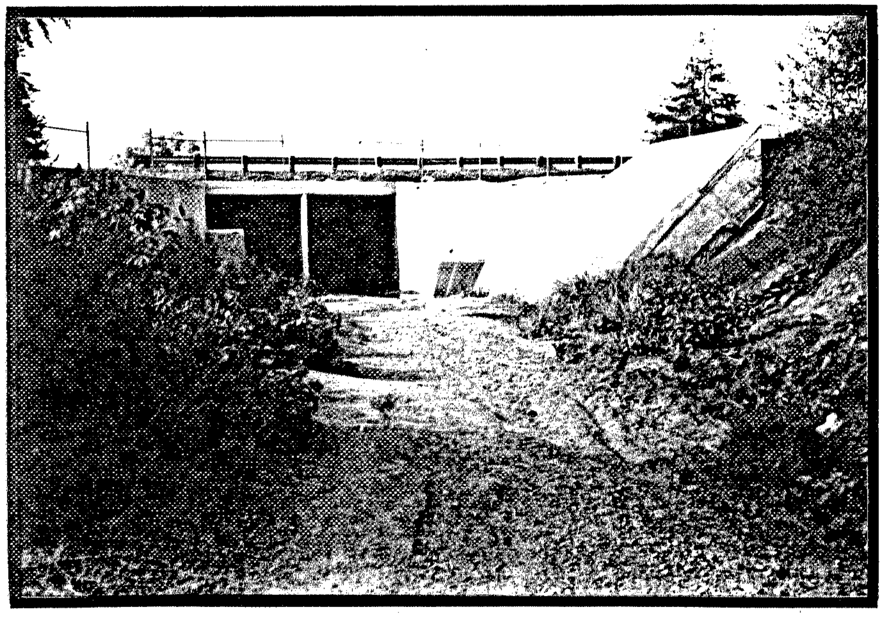
PHOTOGRAPHS OF EXISTING CREEK

7

Taken from the channel bottom looking upstream. A few large trees are growing within the channel such as the willow on the right.

8

A dense stand of sage and willows line the west slope in this section of creek near the Interstate 280 culvert. Taken looking upstream from the top of bank.



9

The Interstate 280 culvert looking downstream.

PHOTOGRAPHS OF EXISTING CREEK

PLATE 5

1. PROJECT DESCRIPTION

The proposed project evaluated in this Environmental Impact Report consists of:

1. installation of an underground double-cell concrete box culvert to replace the existing reach of Calabazas Creek between Interstate Highway 280 and Stevens Creek Boulevard;

2. filling of that reach of the existing creek; and

3. enlarging of the box culvert underneath Stevens Creek Boulevard.

The location, objectives, engineering description, and graphic illustrations of the proposed project and of the alternatives to the project are presented in detail in the Engineer's Report which accompanies this Environmental Impact Report and need not be duplicated. The proposed project is discussed in the Engineer's Report as Alternative No. 6.

2. PHYSICAL CONSIDERATIONS

A. GEOLOGIC

1. Existing Geologic Conditions: Based on field examination of the existing creek, a report on geology and soils of the project site was prepared in October 1975 by the SCVWD (Appendix B). That report served to establish the setting for the alternatives discussed in the Engineer's Report and is briefly reviewed here.

The reach of Calabazas Creek being considered is cut through young and older valley fill deposits which were deposited as alluvial fans. The young alluvial and older alluvial deposits consist of horizontal beds and lenses of sand, gravel, silt, and clay, to a thickness of an estimated 1,500 feet. The sand and gravel were deposited as alluvial fans or stream channel deposits, and the finer-grained fill deposits were deposited as basin, tidal, or marine deposits.

In general, the area is covered by 1-1/2 to 4 feet of grayish brown Yolo silty clay loam containing occasional gravelly clay layers. Below this is a thick zone of clay loam material ranging between 6 to 8 feet. This zone shows extensive shrinkage cracking. The next zone is a clay loam - sandy clay layer about 2 to 3 feet thick, which grades into a tan gravel clay zone of unknown thickness. The creek bed is in this zone. The channel is between 14 and 16 feet deep and some downcutting of the creek is occurring.

Where lateral migration of the creek has been taking place, the channel walls are very steep, being nearly vertical at some locations (Plate 3 and 4, Photos 3, 4 and 6). Undercutting is present in places. Due to the extensive cracking in the clay loam zone as well as the undercutting, the banks in these areas are in tension and failures are common.

Dumped rubble obstructs the flow and has resulted in scour holes being formed. Some of the material from spoil piles and fill located along both sides of the creek enters the channel when banks fail. Where erosion is not active, natural slopes range from 1:1 to 2:1, but are mostly 1-1/2:1. It appears that the steep banks will seek 1:1 to 1-1/2:1 slopes.

The east bank has fill material along about three-quarters of its length. The northerly portion of this reach has a sharp bend where loss of bank has substantially widened the channel (Plate 1).

In general, erosion in this length of the creek follows a set pattern. The channel gradient is steep, thus producing high velocity flows. These flows scour the bottom and the toe of the banks, causing undermining and eventual collapse. Soil conditions are such that this will be a continuing process, but it will correct itself with time, although stabilization could take hundreds of years to occur.

2. Geologic Impacts: The impacts on geology and soils in the project area from relocating this reach of the creek into a buried box culvert will essentially be beneficial. Abandoning this length of existing creek and filling it with well-compacted soil will eliminate the erosion and obstruction problems which would otherwise continue within that open channel, as well as the downstream deposition of sediment. Continued erosion and bank failure would limit future development in the vicinity of the creek, whereas filling will result in the area of the existing creek as well as its surroundings becoming usable land. Installing the buried culvert and backfilling around and above it will also result in usable land suitable for roads, parking and landscaping. Construction of a new and larger culvert under Stevens Creek Boulevard will have little effect upon the geologic and soils conditions in the area, except that it will eliminate potential flooding which would otherwise result in modification of surface soils.

3. Unavoidable Adverse Geologic Impacts: None.

4. Mitigation of Geologic Impacts: None required.

5. Irreversible Geologic Impacts: Construction of the concrete box culvert will cause removal and disruption of native soils, and their replacement by the culvert itself and this reach of the existing creek will be filled. Neither of these modifications is likely to ever be reversed. However, the effect on the area's geology from these actions will not be adverse.

B. HYDROLOGIC

1. Existing Hydrologic Conditions: It is the policy of the Santa Clara Valley Water District to design flood control measures to have sufficient capacity to accommodate the one percent flood. (For discussion on this subject see Appendix C).

In the fall of 1974, the District started to consider various alternatives for the Vallco Park reach. During this evaluation, two facts were apparent. First, although subject to severe erosion, the existing channel does have capacity for one percent flood flows. Second, any flooding of adjacent property would be caused by overland flow around the inadequate box culvert at Stevens Creek Boulevard. Figure 4 in the Engineer's Report shows the approximate limit of flooding which would occur under one percent flood conditions if that culvert is not enlarged. The north end of the existing culvert is shown on Plate 3 in Photo 1.

The unconsolidated alluvial sediments which underlie the valley floor area of Santa Clara Valley comprise one of the large and significant ground water basins of California (SCVWD, 1975). Although the artificially created streambed in this reach of the creek does not usually contain water during the summer months, when there is flow in the creek it is estimated that the project reach contributes .5 to 1 acre foot of recharge water per day to the ground water basin (SCVWD, 1976). The recharge loss would be about 10% of the total recharge capacity of Calabazas Creek. In the 1950's, gravel dams were used to make this portion of the creek serve as a recharge area when water was available. It could be used again when a supplemental supply of water is delivered to Santa Clara County.

The quality of the water which runs in Calabazas Creek cannot be evaluated because no monitoring has been done by the District or by other agencies concerned with water quality. The major influence on water quality in the stream is urban storm runoff which results in the introduction of considerable amounts of oil, grease and other toxic materials (primarily from street and parking lot surfaces) into the water which ultimately discharges into South San Francisco Bay. Deliberate dumping of garbage, lawn cuttings and other debris into the streambed, which has been observed, also degrades the water quality. Water quality varies considerably during the year. Runoff from the first rains carries high concentrations of pollutants and is of poor quality. Conversely, runoff during the winter months dilutes urban waste material and the water quality improves (SCVWD, 1975).

2. Hydrologic Impacts: The most significant hydrologic impact will result from the installation of the new and larger box culvert under Stevens Creek Boulevard. This will have sufficient capacity to eliminate potential flooding from the one percent flood and will obviously be beneficial. Modification of the open creek in the project reach is not required from the point of view of flood control, since it has adequate capacity now. The box culvert which will replace this length of creek is designed to be large enough to accommodate the one percent flood.

Placing this reach of the creek in a concrete box culvert will completely eliminate the ground water recharge function of the existing length of creekbed.

Except for the land devoted to buildings, virtually all of the area of Vallco Park through which this reach of Calabazas Creek flows is to be devoted to roads, driveways and parking lots. Polluted runoff developed from these surfaces, as well as from the roofs of the buildings, will enter the culvert through the local storm water systems, eventually ending up in the Bay. This would be true with any of the alternatives considered, including leaving the existing creek, except that an earth or rock-lined open channel would have a slightly more beneficial effect upon the quality of water passing through it than would an enclosed smooth concrete culvert.

Installation of the box culvert will eliminate erosion from this reach of the creek, reducing the downstream turbidity and improving the quality of the water which flows in the creek and discharges into the Bay.

3. Unavoidable Adverse Hydrologic Impacts: Loss of the ground water recharge capacity of the existing earth channel could be a long term and cumulative adverse impact unless mitigated.

4. Mitigation of Hydrologic Impacts: Consideration should be given to developing an area alongside the creek to which water can be diverted for recharging the ground water basin. Depending upon soil characteristics and location of this area, it could be sized to afford the same ground water recharge capacity which it is estimated the concrete culvert will eliminate. This area need not be within the limits of Vallco Park properties, provided that it feeds the same aquifer now being augmented by the creek. Lacking a suitable site adjacent to the creek, the same type of recharge mitigation facility could be created elsewhere, served by imported water, to supply the same ground water basin.

5. Irreversible Hydrologic Impacts: The beneficial impacts of eliminating erosion and potential flooding will be permanent. The loss of recharge capability from this reach of the creek will be irreversible.

C. VISUAL AND AESTHETIC

1. Existing Visual and Aesthetic Conditions: Currently, the area in the immediate vicinity of this length of creek is generally level agricultural land, some of which has remnants of orchard, but most of which consists of uncultivated open fields. Piles of asphalt, concrete and excavation debris as well as large quantities of clean fill have been dumped along both sides of the creek. There are a number of farm buildings scattered in the orchard to the southeast of the creek, and the nearest existing building in Vallco Park is the Four-Phase plant about 600 feet northwest of the creek (Plate 1).

As can be seen from the photographs on Plates 3, 4 and 5, the appearance of the existing creek varies considerably along this reach. Where there is thick vegetation concealing the bank, the stream channel is attractive and natural in appearance (Photos 4, 5 and 8). But, where steep eroded banks are exposed for lack of vegetative cover, the appearance is quite the opposite (Photos 6 and 7).

The piles of asphalt, concrete, excavation debris and earth along the sides of the creek channel are unpleasant to see, as is the litter dumped into the creekbed. The sacked concrete wing-wall transitions at the north end of the Stevens Creek Boulevard culvert are particularly unattractive, and they are especially noticeable from the sidewalk above.

The large coast live oak and the mature orchard trees to the southeast of the creek just north of Stevens Creek Boulevard have a strong visual impact, affording a pleasant change of scale in the otherwise flat open surrounding area (Photo 2).

The open stream has greater aesthetic significance during the months when it contains running water.

2. Visual and Aesthetic Impacts: The most apparent impact of the project will be the obliteration of the creek channel with its open space, its vegetation, and its seasonal running stream. Although Vallco Park is indicated to have landscaped areas in and around the parking lots and walkways, the proposed project will result in an intensively developed urban setting, and the ribbon of natural-appearing open element will be lost forever. As streams increasingly are either obliterated or made inaccessible by development, the possibility of experiencing running water - particularly in a setting of varied vegetation - becomes a significant consideration, even if the stream is intermittent.

3. Unavoidable Adverse Visual and Aesthetic Impacts: The impacts noted above will be significantly adverse and will unavoidably result from the project as proposed.

4. Mitigation of Visual and Aesthetic Impacts: Reference was made in Section 2.B.4 to an off-site recharge area as a means of mitigating the loss of recharge capacity. This same concept could apply to the loss of riparian vegetation. The land selected for the pond could be large enough to afford sufficient area for regenerating riparian habitat which would be nurtured by the ponded water.

The creation of a recharge area surrounded by riparian vegetation would be the most suitable mitigation for the loss of significant aesthetic features by regenerating similar natural plant and water elements - even though they may be at a different location and somewhat different in character. The basis for this type of mitigation is clearly established in SCVWD Resolution No. 74-40 which states the policy of the District regarding landscaping of District projects (Appendix B). That policy was adopted, "In the interest of minimizing the impact District projects may have on the environment and to enhance the aesthetic values of the community." The statement indicates in part that, "All new District projects shall be designed with aesthetic concern, and landscaped. Consideration shall be given to reestablishment of riparian habitat. The provision for such aesthetic treatment and landscaping shall be a part of the project design.......Where the removal of a tree is required for essential maintenance, a reasonably mitigating replacement shall be made in the same neighborhood." (emphasis added).

Other mitigation measures are inherent in the project. Filling this reach of creek channel will eliminate the unsightly eroding banks upon which vegetation has been unable to become established, will remove the sacked concrete treatment near Stevens Creek Boulevard, and will eliminate the recurring debris and trash which is deposited in the streambed.

Landscaping proposed for the industrial-office development will reintroduce visually attractive elements. The developers also intend to preserve the coast live oak near Stevens Creek Boulevard as a major visual feature (Ward 1975).

5. Irreversible Visual and Aesthetic Impacts: The impacts discussed in Item 2 above will be irreversible.

3. ECOLOGICAL CONSIDERATIONS

A. FLORA

1. Existing Flora Conditions: An environmental assessment of the project reach of the existing creek was prepared by the SCVWD on two different occasions - October 1974 and October 1976. Those reports are the source for the descriptions contained in this section and in the section on fauna.

The land immediately surrounding this reach of Calabazas Creek is largely fallow open space or orchard. The area is in transition from agricultural to commercial use with the land to the west and northwest already covered by buildings or pavement (Plate 1).

The reach of Calabazas Creek under consideration currently contains a mixture of native riparian plant species (about 46%), naturalized plants (about 48%), and agricultural remnants (about 6%). The plant species composition has not changed noticeably during the last two years of observation. However, the distribution of plants has changed slightly, as some plants mature and more aggressively compete with others. The native perennials, shrubs and trees are gradually replacing many of the annuals, demonstrating on-going secondary succession.

The successional change in vegetation is the natural process whereby a disturbed plant community restores itself to a more stable condition through a series of changes in the plant species composition and distribution. These changes are initiated by physical changes in the environment and the responses of various plants to altered conditions.

Because the creek banks display varying degrees of slope stability, some areas are well vegetated and appear stable, while others are obviously unstable, showing signs of recent active sloughing to the point of being vertical. The on-going sloughing of these slopes prevents plants from becoming established, thus helping to perpetuate the unstable conditions.

The channel bottom is a mixture of gravel, silt, or silty gravel with no large rocks. Water-loving herbs and grasses grow up to the edges of the low-flow channel.

The riparian plant community shows a large species diversity with a relatively high variety of localized habitat. The diversity of plants supports a corresponding variety of wildlife populations including insects, spiders, birds, reptiles and mammals. Many seed and fruit bearing plants are also present to support wildlife. Table 1 lists the major species of plants observed at the project site.

Willows dominate the upstream half of the reach, with four species represented - red, yellow, arroyo, and weeping willows. These trees vary in size up to 3 inches in diameter and 15 feet in height. Coast live oaks, valley oaks and black walnuts are also present in the upstream half. The oaks and black walnuts vary up to 4 inches in diameter and about 15 feet in height, with a particularly noteworthy exception - a huge mature coast live oak east of the creek and just north of Stevens Creek Boulevard.

The next layer of vegetation is dominated by California blackberries, cat-tails, toyon, and coyote brush. The upstream understory is dominated by umbrella sedge, California mugwort, water smartweed, spiny cocklebur and numerous other water-loving herbs and grasses.

The area occupied by California blackberry vines has increased considerably during the last two years. Several young California buckeyes are rapidly gaining a foothold in the center of the reach. They are largely restricted to the east bank of the creek, possibly due to more favorable sun exposure.

TABLE 1

OBSERVED PLANT SPECIES
CALABAZAS CREEK PROJECT SITE

*Valley Oak (8" & 12" dia.)	_Quercus lobata_
California Pepper Tree	_Schinus Molle_
*Toyon	_Heteromeles arbutifolia_
English Walnut (grafted)	_Juglans regia_
*Umbrella Sedge	_Cyperus_ sp.
*Horsetail	_Equisetum_ sp.
*Sage	_Salvia_ sp.
*Red Willow	_Salix laevigata_
*Arroyo Willow	_Salix lasiolepis_
*Yellow Willow	_Salix lasiadra_
Weeping Willow	_Salix babylonica_
*Common Cat-tail	_Typha latifolia_
Spiny Cocklebur	_Xanthium strumarium_ var. _canadense_
Black Walnut	_Juglans nigra_
*Coyote Brush	_Baccharis pilularis_ ssp.
*California Blackberry	_Rubus vitifolius_
*California Boxelder	_Acer Negundo_ ssp. _californicum_
*Blueberry Elder	_Sambucus mexicana_
*California Buckeye	_Aesculus californica_
Artichoke	_Cynara scolymus_
Lamb's Quarter	_Chenopodium album_
Metake Bamboo	_Pseudosasa japonica_
*Coffeeberry	_Rhamnus californica_
Common Wild Cucumber	_Marah fabaceus_
Fireweed	_Epilobium angustifolium_
Bermuda Grass	_Cynodon Dactylon_
Wild Peppermint	_Mentha piperita_

* Species indigenous to Santa Clara County.

TABLE 1 (Continued)

Narrow-Leaf Milkweed	Asclepias fascicularis
Water Smartweed	Polygonum amphibium
Horseweed	Conyza canadensis
*Poison Oak	Rhus diversiloba
*California Wild Rose	Rosa californica
White Sweet Clover	Melilotus albus
Milk Thistle	Silybum Marianum
Black Mustard	Brassica nigra
Barnaby's Thistle	Centaurea solstitialis
*Coast Live Oak	Quercus agrifolia
Wild Radish	Raphanus sativa
*California Mugwort	Artemisia douglasiana
Wild Oats	Avena fatua
*Fuschia-Flowered Gooseberry	Ribes speciosum
Curly Dock	Rumex crispus
Cheeseweed	Malva parviflora
Common Horehound	Marrubium vulgare
Sweet Fennel	Foeniculum vulgare
Bindweed	Convolvulus arvensis
Castor Bean	Ricinus communis
Escaped Fruit Trees (Almond, Peach, Prune, etc.)	
Other unidentified Herbs & Grasses	

* Species indigenous to Santa Clara County.

Source: Stiles, 1974 and 1976.

The downstream half of the reach has a different character than the upstream half. The lower reach is more open, with fewer trees. The trees present are smaller and of different species than those upstream. California wild rose and California blackberry vines are concentrated in a few locations in this area. Near the downstream end of this reach several large sage shrubs are well established and flourishing. Some are nearly tree-sized. The remainder of the channel in the downstream half either has side slopes too steep to support vegetation or is only covered with low herbs and grasses.

In its present condition, the project reach of Calabazas Creek is part of a continuous riparian corridor. A linear segment such as the project reach often enables the movement of wildlife to a more extensive habitat up and downstream of the particular area.

2. Flora Impacts: Filling the existing open creek channel will completely eliminate all of the present vegetation within and immediately adjacent to the streambed. Special measures may have to be taken to protect the large California live oak if fill is to be placed at its base. Construction of the underground box culvert will occur in relatively barren land which has been cultivated for agriculture and will have little impact on flora except north of Vallco Parkway where orchard trees will be destroyed within the culvert right-of-way.

3. Unavoidable Adverse Flora Impacts: Both the California Department of Fish and Game (Smith, 1976) and the U.S. Fish and Wildlife Service (Breitenbach, 1976) consider riparian vegetation to be more important to a greater number of wildlife species than any other habitat type. Even though this stretch of creek historically developed from a man-made drainage ditch and the vegetation represents a broad mix of plant species, the very diversity of material which will be destroyed and the loss of that shelter and food supply for wildlife will be significantly adverse.

4. Mitigation of Flora Impacts: The developers of Vallco Park indicate that extensive landscaping will be installed in this general area as part of their development. This will not replace the riparian habitat but will substitute an urban type of ornamental landscape. It would be beneficial if native plants are utilized as much as possible, particularly various species which afford food and cover for wildlife.

Sections 2.B.4 and 2.C.4 discuss the introduction of an off-site area for recharge of ground water and for regeneration of riparian vegetation. Carefully selected plant species could provide the necessary cover and variety of food which is essential for a mixed wildlife community. The time frame for the establishment of mature vegetation is relatively short. Grasses would require about two years, shrubs would need five to ten years, and trees would be quite full in ten to twenty years, depending on the species. However, some varieties of trees require fifty to one hundred years to reach maturity.

To develop a wildlife environment of similar value to that which presently exists, it will be necessary to have sufficient land area within a reasonable distance from the project site, and skilled attention will have to be given to the plant materials selected, the manner in which they are installed, and maintenance during their initial period of acclimatization.

The large coast live oak near Stevens Creek Boulevard should be preserved and every precaution should be taken to prevent damage to the tree or its roots during construction of the project and later when the Vallco Park development occurs.

5. Irreversible Flora Impacts: The loss of the existing reach of open intermittent stream will irreversibly remove the environmental conditions which support the riparian vegetation at this location.

B. FAUNA

1. Existing Fauna Conditions: The existing diversity of plants in this area of Calabazas Creek correspondingly supports a wide variety of animals including mammals, birds, reptiles, amphibians and insects. Table 2 lists the animals both observed and expected at the present site. In October 1974, the largest and most significant number of animals observed was a flock of California quail, estimated at 40-50 birds which use the dense tree and shrub roughly in the center of the project reach. It is probable that these quail are residents of this area, based on the fact that they were observed in the same location on two different days and that sufficient food sources and cover are available to support them. The numerous seed- and fruit-bearing plants throughout the project area provide enough food sources to support a reasonably diverse and well-balanced fauna, including herbivores and predators with the possibility of omnivores such as opossum and raccoon. Small pools of standing water which serve these animals persist through the dry season and were observed in the fall before the winter rains.

Since Calabazas Creek is seasonal in flow, this reach contains no aquatic fishery aspects of any significance (Anderson, 1976).

2. Fauna Impacts: Elimination of the wildlife habitat as proposed for the project will result in a proportionate reduction in animals which depend upon the food, shelter and breeding environment for their very existence. Immobile species will be exterminated and those capable of relocating will probably not survive because of competition for similar surroundings. Interruption of the riparian corridor will adversely affect fauna beyond the limits of the project.

3. Unavoidable Adverse Fauna Impacts: The loss of animals will be unavoidable - at least temporarily. Some of the species, especially urban birds, may return to the general area if suitable food and shelter

TABLE 2

ANIMALS
CALABAZAS CREEK PROJECT SITE

OBSERVED ANIMALS

*California Quail	*Lophortyx californicus*
*Rock Dove	*Columba livia*
Common Crow	*Corvus brachyrhychos*
Killdeer	*Charadrius vociferus*
*Turkey Vulture	*Cathartes aura*
Mockingbird	*Mimus polyglottos*
Brown Towhee	*Pipilo fuscus*
Brewer's Blackbird	*Euphagus cyanocephalus*
*Lesser Goldfinch	*Spinus psaltria*
Song Sparrow	*Melospiza melodia*
*Western Gull	*Larus occidentalis*
House Finch	*Carpodacus mexicanus*
**Anna's Hummingbird	*Calypte anna*
*Blacktail Jackrabbit	*Lepus californicus*
California Ground Squirrel	*Citellus beecheyi*
Western Fence Lizard	*Sceloporus occidentalis*

* Only observed during October 1974 field studies.
** Only observed during September 1976 field studies.

EXPECTED ANIMALS

Redwinged Blackbird	*Agelaius phoeniceus*
Red-Tailed Hawk	*Buteo jamaicensis*
Sparrow Hawk	*Falco sparverius*
House Sparrow	*Passer domesticus*
Black Phoebe	*Sayornis nigricans*

TABLE 2 (Continued)

European Starling	Sturnus vulgaris
Robin	Turdus migratorius
Long-Billed Marsh Wren	Telmatodytes palustris
Lesser Goldfinch (Green-Backed form)	Spinus psaltria
Mourning Dove	Zenaidura macroura
Barn Owl	Tyto alba
Hutton's Vireo	Vireo huttoni
Raccoon	Procyon lotor
Deer Mouse	Peromyscus maniculatus
California Meadow Mouse	Microtus californicus
Norway Rat	Rattus norvegicus
House Mouse	Mus musculus
Little Brown Bat	Myotis lucifugus
Broad-Handed Mole	Scapanus latimanus
Pocket Gopher	Thomomys bottae
Trowbridge Shrew	Sorex trowbridgei
Opossum	Didelphis marsupialis
Southern Alligator Lizard	Gerrhonotus multicarinatus
Gopher Snake	Pituophis melanoleucus
Western Terrestrial Garter Snake	Thamnophis elegans
Common Garter Snake	Thamnophis sirtalis
Western Toad	Bufo boreas
Pacific Tree Frog	Hyla regilla
Yellow-Legged Frog	Rana boylei

Source: Stiles, 1974 and 1976.

is afforded by the Vallco Park landscape treatment. However, those species which depend upon vegetation which will not be replaced or for which no substitute is introduced will no longer be able to survive in this area. The change in landscape treatment will result in a more urban setting which will support a changed composition of species.

4. Mitigation of Fauna Impacts: Careful selection of plant materials to be used in the landscape treatment of this portion of Vallco Park could offset the loss of some of the wildlife habitat which currently exists in the creek. Knowledgeable advice should be sought to determine which plant species will best satisfy the developers' ornamental objectives while maximizing the benefit to wildlife. The City of Cupertino should carefully evaluate all proposed landscaping to assure that this goal is accomplished.

Creation of a recharge area surrounded by riparian habitat - as previously discussed - would be the most effective approach to mitigation of the loss of wildlife food, shelter and breeding areas.

5. Irreversible Fauna Impacts: The ecosystem peculiar to this particular reach of Calabazas Creek will be irreversibly destroyed by the project, and the riparian corridor will be irreversibly interrupted.

4. SOCIO-ECONOMIC CONSIDERATIONS

A. LAND USE

1. Existing Land Use Conditions: The reach of existing creek to be modified traverses property owned by Vallco Park. The section through which it passes is as yet undeveloped, but is intended for development as part of the total Vallco Park undertaking. The land area held by Vallco Park is quite extensive and is being developed in stages as "a mixed-use planned development, including light industry, research and office park, a community shopping center, a regional shopping center, and a proposed metropolitan hotel, all in accordance with a master land use plan adopted in 1964 by the City of Cupertino" (Ward 1975). When completed, the total development is expected to have an employee population of 20,000 (Ward 1975). All of the land contiguous to the reach of the creek being considered is designated as Planned Industrial/Professional Office on the Land Use Element for the Core Area in the General Plan of the City of Cupertino (Cupertino 1973), and is zoned accordingly.

Development has already taken place west of the project site including a building for Four-Phase Systems, Inc., two financial center buildings, and the regional shopping center, part of which is still under construction. Four-Phase "has optioned, and is desirous to construct additional plant facilities between Vallco Parkway and Interstate 280, easterly from their present building to Tantau Avenue" (Ward 1976). The first phase of this expansion has already been approved (Sisk 1976), but it is unclear what the configuration or location of the ultimate development will be or how it will relate to the underground box culvert. These - or any other buildings - cannot be built within the project right-of-way. The District does not consider it acceptable to permit the location of buildings on top of buried culverts because of the obvious closing off of future options and the possibility of future maintenance difficulties.

2. Land Use Impacts: Construction of a new and adequately sized culvert under Stevens Creek Boulevard will remove the threat of potential flooding - an important obstacle to development of this section of valuable land.

Elimination of the creek by burying it underground in a box culvert will provide great benefit to the developers of Vallco Park. It will make it possible to utilize without restriction all of the land currently devoted to stream channel, will permit use of the culvert right-of-way for roads, parking and landscaping, and will afford unobstructed circulation for vehicles and pedestrians, eliminating the cost to the developers of numerous crossings required with an open channel. In addition, the new alignment will open up the present narrow triangular area between the creek and Stevens Creek Boulevard into a much more usable space.

3. Unavoidable Adverse Land Use Impacts: The Vallco Park land, which will be developable as a result of filling the creek, burying the culvert, and eliminating flood potential, is to be utilized for development which is consistent with the City of Cupertino General Plan and zoning. From that point of view, the secondary effects of the project will not be adverse. However, the project will facilitate the commercial development of the property and the elimination of the current open space-agricultural use of the surrounding land. This will add to the cumulative and significantly adverse effects of the conversion of such choice Santa Clara Valley agricultural land to urbanization, aggravating already severe regional air quality degradation, obliterating prime agricultural soils, and burdening public facilities and utilities.

4. Mitigation of Land Use Impacts: As far as can be determined, development plans for the southeast portion of Vallco Park are still indefinite, including what is contemplated for further expansion of the Four-Phase facilities. The opportunity still exists to adjust the alignment of the box culvert to accommodate proposed buildings instead of modifying the buildings to meet a predetermined alignment.

5. Irreversible Land Use Impacts: Urbanization of the surrounding land, which will be facilitated by the project, will be a significant change in land use unlikely to be reversed.

B. COMMUNITY PLANS AND GOALS

1. Existing Community Conditions: In 1973, as part of approval for the Vallco Park regional shopping center, the City of Cupertino imposed a condition that Vallco Parkway be built to six lanes from Wolfe Road to Tantau Avenue (Figure No. 2, Engineer's Report). This will require a crossing over Calabazas Creek and the developers of Vallco Park are understandably concerned that action on that crossing be taken in the near future, since "this must be completed prior to opening of Phase II of the regional shopping center, about March 1977" (Ward 1975).

In addition, as part of the conditions of approval, the developers agreed to participate in the funding of the Tantau Avenue overcrossing. The portion of the regional shopping center which is built over and to the east of Wolfe Road may not be occupied until this overcrossing is completed.

Finch Avenue was originally intended to extend northerly from Stevens Creek Boulevard to a collector-distributor road at Interstate 280. Current plans call for this street not to be carried beyond Vallco Parkway since CalTrans has indicated that funds are not available for improvements at the freeway (Ward 1976).

Although approval has been given for the initial expansion by Four-Phase Systems, Inc., most of the remaining land in the southeast portion of Vallco Park which is adjacent to Calabazas Creek cannot be developed at the present time. Traffic studies made in 1973 indicated that adjacent streets in Cupertino could not handle the additional load which would be generated by full development of Vallco Park (Sisk 1975). Another study in late 1975 concluded that the need already existed to reduce peak traffic loads by 25% and that there was no foreseeable prospect of achieving this either by modification to the road system or by alternative transportation. An effective public transportation system will have to function regionally and, obviously, cannot be achieved by Vallco Park alone (Viskovich 1975). Because the present road network is incapable of accommodating the anticipated vehicles, the City of Cupertino has placed the southeasterly 69 acres in an "uncommitted" status, declaring that they cannot be developed as originally proposed "unless alternate modes of transportation or alternate methods of the collector-distributor road may be realized" (Viskovich 1974). Although the developers believe that additional development will be able to take place "in the near future and probably within a five-year period" (Ward 1976), the City of Cupertino staff sees no change which would justify such a conclusion (Sisk November 1975 and November 1976).

The proposed development of this portion of Vallco Park is consistent with the General Plans of both the City of Cupertino and Santa Clara County. However, the Conservation of Resources Element of the Santa Clara County General Plan (adopted June 21, 1973) states that "The effect of development proposals on natural (plant) communities should be taken into consideration by local government in making land-use decisions."

The policy of SCVWD toward landscape aesthetics and riparian habitat was covered in previous sections, as was the importance placed on such habitat for wildlife by the California Department of Fish and Game.

The City of Cupertino has expressed no interest in this reach as an open space element or as a recreational feature either in its adopted General Plan or in informal discussions. The staff is not favorably impressed with the appearance of this channel, particularly as compared to other more heavily vegetated natural streams where trails are proposed (Sisk and Viskovich 1975). Nevertheless, the Open Space and Conservation Goals and Policies adopted by the City Council in 1972 as the framework for the Open Space and Conservation Element of the Cupertino General Plan include goals which specifically apply to the elimination of a reach of open streambed. They are:

- Provision of open space to meet man's survival needs for clean air, clean water and an unspoiled environment.
- Conservation and production of water for human use and for its scenic and recreational benefits.
- Preservation of wildlife habitats and natural vegetation as an essential part of the ecosystem for both man and wildlife.

To implement such goals, a number of measures are proposed, including:

- Flood control should whenever possible be established through the use of flood plains and small weirs rather than through concrete channels and large dams.

2. Community Impacts: Installation of a buried box culvert to replace the existing open reach of Calabazas Creek will accommodate the extension of Vallco Parkway to Tantau Avenue. It will also permit Finch Avenue to be extended northerly to intersect with Vallco Parkway without interference from the open creek channel or the culvert under Stevens Creek Boulevard. It should have no effect upon the "uncommitted" status of the southeasterly 69 acres in Vallco Park, since the impediment to the development of that area stems from traffic rather than creek considerations.

3. Unavoidable Adverse Community Impacts: The elimination of the creek and its vegetation will be contrary to the recommendations contained in the Conservation of Resources Element of the County General Plan. The areas of conflict which appear in the Element are as follows:

"Policies: Water Resources

7. Continued study should be made of ways to achieve reduction of flooding risks without impairing the natural qualities of streams.

8. The recreation and open space potential of all water features should be fully developed, including watersheds, reservoirs, natural streams, and other waterways.

"Policies: Vegetative Resources

1. The County's vegetative resources should be carefully conserved because of their importance for wildlife habitat, for watershed protection, for climate moderation, for erosion control, and for their many other values.

"Policies: Open Space Resources

1. All levels of government should make concerted efforts to conserve open space resources."

Filling the existing creek will also be inconsistent with the importance given to riparian habitat by the California Department of Fish and Game, which classifies it as the most valuable wildlife resource in the State (Anderson and Smith, 1976).

4. Mitigation of Community Impacts: The beneficial impacts upon the street system within Vallco Park require no mitigation.

Failure to preserve or enhance this length of open stream - the stated goal of several public agencies - can best be mitigated by creating a new and similar vegetation and water environment nearby.

5. Irreversible Community Impacts: If the public agency goals are not fulfilled as an integral part of the project, the effects will be irreversible.

C. ECONOMIC

1. Existing Economic Conditions: The flat usable land within the vicinity of the project is quite valuable. As one indication of the range of land value involved, a unit price of $3.00 per square foot was used for right-of-way costs in the Engineer's Report - or about $130,000 per acre. (This amount was utilized merely for comparison purposes and was not intended to represent actual value - but it probably is close.) On the other hand, land within the existing creek channel is considered to have no value in its present condition.

The potential for flooding and bank erosion within the Vallco Park development poses a serious threat of economic loss to business.

The developers of Vallco Park are responsible for providing a crossing over the existing creek or over the proposed box culvert for a six-lane wide extension of Vallco Parkway.

There are no homes, business establishments or other improvements which have to be relocated to accommodate the project.

2. Economic Impacts: The principal beneficial economic impact will be the increase in valuable usable land. Almost 3 acres will be gained by the filling of the existing channel - with no restrictions on the use of that land. The so-called right-of-way for the box culvert will actually end up being an easement since the private developers will be able to utilize the surface above the culvert for roads, parking and landscaping. Since such improvements would occupy an equivalent area

in any event, the installation of a buried culvert has little effect upon usable land and the filled channel land will be a net gain. This will result in a corresponding increase in the tax base for the City of Cupertino and the County.

Elimination of flood potential in the area will remove the threat of economic loss and will encourage further investments in capital improvements.

The box culvert is to be built with sufficient structural capacity throughout its entire length to support vehicular traffic, thus eliminating any costs to the developers for a Vallco Parkway bridge or for the many other vehicular and pedestrian crossings which would be required across any alternative open channel through Vallco Park. It is estimated that a bridge wide enough to accommodate Vallco Parkway would cost between $150,000 and $200,000, depending upon the width of the channel to be spanned.

There will be an ongoing economic benefit to the District since the buried box culvert will require less annual expenditures for maintenance than the existing creek would require if the District assumes responsibility. Of primary importance will be the elimination of erosion and deposition of sediments downstream.

Construction of the project will provide employment for a substantial number of workers, most of whom will probably be hired locally.

3. Unavoidable Adverse Economic Impacts: The project desired by Vallco Park is significantly more expensive than any of the other alternatives considered. It is estimated that the total cost will amount to $1,694,000. (See Table 2 of the Engineer's Report for comparison with the estimates for the five other alternatives.)

4. Mitigation of Economic Impacts: By agreement, the District and the developers will share the costs for the projects, with Vallco Park bearing

the majority of the costs. Information regarding the agreement is provided in the Engineer's Report.

5. Irreversible Economic Impacts: None

D. RECREATION

1. Existing Recreation Conditions: The privately owned property around the project site is not fenced and there are many incidents of trespassing reported (Foster 1976, Lester 1976). High school students short cut through the culvert under Interstate 280 and along the channel. There are recurring problems with motorcycles and jeeps, with firearms being discharged, and with the area being used as a "lover's lane". Attempts to curb these activities have met with little success. Chain link fencing has been torn out and 1/4 inch airplane wire is regularly cut (Lester 1976). The steep sides are quite hazardous, and particularly so during the occasional high velocity flows in the channel. Accidents and injuries have occurred to trespassers. However, this type of security problem occurs in virtually all areas providing isolation and concealment, and is not unique to Calabazas Creek (Foster 1975).

2. Recreation Impacts: The project will remove the semi-concealed creek channel which attracts the various trespassers. Moreover, as this portion of Vallco Park is developed, the isolated protection afforded the activities described above will be eliminated, and the problems of safety and security associated with the open channel will disappear.

3. Unavoidable Adverse Recreation Impacts: Although the City of Cupertino may not envision a public trailway or park facility at this location (Sisk 1975), with suitable improvements the stream channel - with its sense of open space, its variety of greenery, and its seasonal flow - could afford valuable passive recreation opportunities

for the many employees who will eventually work at Vallco Park. This resource, and its potential for such use, will be lost when the channel is filled.

4. Mitigation of Recreation Impacts: Alternative recreation areas, suitable for walking, resting or other passive outdoor activities in pleasant surroundings, could be planned into the Vallco Park facilities by the developers. Relief from their indoor work environments would be extremely beneficial for the workers, and indirectly for their employers.

Depending upon its location and physical characteristics, if a recharge-riparian vegetation area is provided as discussed elsewhere, it could have recreation potential.

5. Irreversible Recreation Impacts: The loss of the creek as a setting for potential recreation activities will be irreversible.

5. INSIGNIFICANT EFFECTS OF THE PROJECT

A. PROJECT CONSTRUCTION

Some impacts, in addition to those already discussed, will result from the activities associated with the construction of the project. These unavoidable adverse impacts will be short-term and are listed below.

- * Temporary traffic disruption will occur at Stevens Creek Boulevard during the reconstruction of the existing box culvert. Work affecting heavily travelled streets is usually done in sections, allowing traffic to continue to flow. Minor delays will probably occur at the construction zone, but it is reasonable to assume that detours can be achieved in an efficient and safe manner.

- * Noise levels will temporarily be high at the construction site, with high level peaking from equipment and material handling. Fortunately, except for one house, there are no residential areas or schools near the site to be affected by noise.

- * Particulates, dust and gaseous emissions from construction equipment will adversely impact local air quality for short periods.

- * As with all construction projects, the use of modern equipment and power tools, as well as the transporting of construction materials to the site, will involve periods of intensive energy consumption. This can be somewhat reduced by regular maintenance on equipment and vehicles.

B. ARCHAEOLOGY

As indicated in the Engineer's Report, the stream was artifically created by local farmers about 1850 to drain a marshy area. This fact, plus the many years that all of the involved land has been cultivated for agriculture, leads to the reasonable conclusion that archaeological sites will not be encountered in the area to be disturbed by the project. Therefore, an archaeological reconnaisance of the site is considered unnecessary.

6. ALTERNATIVES TO THE PROPOSED PROJECT

A. GENERAL

The Engineer's Report contains a thorough discussion of the general methods available to offset or overcome flooding and erosion problems in stream channels. These include: flood plain zoning, flood insurance, reservoirs or diversions, and stream channel modifications. That report also explains why the last method is the only one suitable for this project.

In this reach of Calabazas Creek, the flood hazard exists only because of the inadequately sized box culvert under Stevens Creek Boulevard. The open channel itself has capacity for the one percent flood flows, but would have to be treated for severe erosion. The Engineer's Report evaluates six alternative channel treatments, all of which are basically concerned with the elimination of bank erosion. For all of those six alternatives, the inadequate box culvert under Stevens Creek Boulevard will have to be replaced, since backflow from that structure could cause overland flow and flooding of adjacent property.

Right-of-way widths required for the various alternatives are noted in the Engineer's Report. These vary, depending on the cross-section of the channel, whether one or two maintenance roads are required, and the distance between flow line and surrounding grade. The report's illustrations show the cross-sections for the different channels.

Figure No. 6 in the Engineer's Report, and the text describing it, clearly illustrates the alignments considered for each of the alternatives, and the increase in excavation and earthwork for those alternatives which do not follow the exact alignment of the existing channel.

As noted in the Engineer's Report, all of the open channel alternatives, regardless of the channel lining or treatment, would be landscaped, would have a six-foot chain link fence along both sides, and would contain a maintenance road along the top of each bank (except for the concrete-lined channel which requires a road on only one side). In all cases, the maintenance roads could be installed below the level of the surrounding land, adding flood capacity which would reduce the required right-of-way width, and offering the possibility of locating the fences below eye level with the landscaping between the roads and the edge of the right-of-way. These apparent advantages would have to be evaluated against the added cost of excavation for depressing the roads.

The project which this report has examined in detail is what is referred to as Alternative No. 6 in the Engineer's Report - the buried concrete box culvert. This section comments on the alternatives to that proposed project, including No Project and Alternatives 1 through 5. Except where desirable for clarity, the descriptions, evaluations and cost comparisons covered in the Engineer's Report are not repeated here.

B. NO PROJECT

One possibility would be to leave existing conditions just as they are - with no work or expenditure by the District - at least at the present time. This alternative to the project would leave a large area of surrounding land subject to flooding from backup and overland flow, and the existing creek banks would continue to erode and contribute to downstream sedimentation.

The threat of flooding and the continuing erosion are not the main obstacles to development of the southeasterly 69 acres of Vallco Park. That area is in an "uncommitted" status blocking development because adjacent streets will not accommodate any additional traffic load. Nevertheless, there is an urgency to proceed with the ultimate channel measures because a channel crossing has to be installed to permit the extension of Vallco Parkway as required by the City of Cupertino as a Condition of Approval on the regional shopping center.

In addition, to do nothing at this time would not be a reasonable approach because the flooding potential threatens improved properties upstream from Stevens Creek Boulevard as well as the unimproved Vallco Park land. As a minimum, installation of a new and adequate box culvert under Stevens Creek Boulevard is indicated to alleviate the flooding problem.

C. ALTERNATIVE NO. 1 - PRESERVE THE EXISTING CHANNEL

This alternative would be limited to acquiring sufficient right-of-way to permit bank erosion to continue and eventually stabilize, and to provide for maintenance roads on both sides of the channel. With this alternative, it would be possible to retain the present riparian habitat of the creek with its mix of native and introduced plant species. A selective management program could gradually eliminate the non-native plant species, and encourage a fully developed native riparian plant community. However, where banks are nearly vertical they will continue bare of vegetation, and on unstable slopes subject to ravelling or failure, the natural colonization and succession of plants will be impeded until stable slopes evolve.

D. ALTERNATIVE NO. 2 - MODIFY AND STABILIZE THE EXISTING CHANNEL

There are two approaches for improving the existing channel along its present alignment. With Alternative No. 2A, erosion protection and bank stability would be achieved by laying back the steepest banks and lining them with two different materials. Where slopes are steeper than 1.5:1, the bank would be trimmed to 1.5:1 and protected with sacked concrete riprap. Slopes between 1.5:1 and 2:1 which are subject to erosion would also be protected with sacked concrete riprap. Slopes flatter than 2:1 which are subject to erosion as well as the channel bottom would be protected with rock lining. Alternative No. 2B is similar except that all side slopes would be cut back to 2.5:1, and only the toe and bottom of the channel would be lined with rock. These two alternatives would require about the same right-of-way width.

Alternative 2A would result in a fully lined channel, requiring removal of all existing vegetation, and affording little opportunity for landscaping. In the tight-fitting rock areas, although planting could not be introduced without creating plant wells, volunteer growth may become established with time as the crevices fill with silts and wind-blown soil. Such growth could be trimmed if excessive in height, but would not have to be removed. The sacked concrete areas would remain unsightly and bare of vegetation (see Plate 3, Photos 1 and 2).

Alternative 2B would also require the elimination of all existing vegetation, but the 2.5:1 earth banks would permit a more effective landscaping of the channel. Selected vegetation could be lower on the slopes for a natural appearance and to reconstitute the wildlife habitat otherwise lost. (For a more complete discussion of such landscape treatment see Alternative 3.) As with Alternative 2A, volunteer growth could be encouraged in the lower channel area which is lined with rock, and this would significantly soften the impact of the rock's appearance.

E. ALTERNATIVE NO. 3 - EARTH CHANNEL

This treatment would consist of an earth channel with 3:1 side slopes, and with two concrete grade control structures across the channel bottom to decrease the effective grade. The channel would follow the existing creekbed except at the northern end where the sharp bend would be straightened out (see Figure No. 6, Engineer's Report).

Removal of the vegetation for the installation of an earth trapezoidal channel would have only a short-term adverse impact if the channel is fully landscaped upon completion. Landscaping which is well planned, properly installed, and adequately maintained could, in time, convert an earth trapezoidal channel into a lush greenway, affording visual delight and reestablishing wildlife habitat. Some minor enlargement in channel capacity might be necessary to allow for any obstruction of flow resulting from the vegetation in the channel. In this approach, the channel bottom could be planted with low native grasses, the lower slopes could be planted with native plant material limited at mature height to 3 or 4 feet and if depressed maintenance roads are used, the slopes between the road and the edge of the right-of-way could be planted with native shrubs and high-branching trees. The height limitation on slope planting within the channel would minimize interference with maintenance equipment. Heavy shrub and tree planting on the upper slopes would be very desirable for visual screening and scale, and would have slight effect on flows since this level would rarely be inundated.

F. ALTERNATIVE NO. 4 - ROCK-LINED CHANNEL

This solution would be similar to Alternative No. 3, including its alignment, except that there would be no concrete grade control structures and the channel slopes and bottom would be protected with a rock lining. Landscape considerations would be similar to those described for the rock-lined portions of Alternative No. 2B, where vegetation may become reestablished, but in considerably less abundance than in an earth-lined channel.

G. ALTERNATIVE NO. 5 - CONCRETE-LINED CHANNEL

For this alternative, a trapezoidal concrete lining would be installed along the same alignment as Alternative 3 and 4. Lining the channel with concrete would result in low maintenance as well as virtually permanent, and quite effective erosion and bank control. This treatment also would require the minimum right-of-way width of any of the open channel alternatives. A concrete-lined channel would have the most adverse visual impact, resulting in a harsh band of light gray concrete with landscaping limited to the strips above the lining.

7. GROWTH INDUCING IMPACT OF THE PROPOSED PROJECT

The present constraint on further development in the southeast portion of Vallco Park is not related to flooding or erosion considerations, and implementation of the project will not accelerate that development. However, it will encourage the Vallco Park improvements once the traffic-related moratorium is lifted by removing a major barrier to the construction of internal roads, driveways and parking lots.

Although flooding is a recognized problem, there is nothing to suggest that this potential has slowed down or will slow down development in the area adjacent to this reach of Calabazas Creek. Substantial development has already taken place in Vallco Park north of Interstate 280 within the potential flood zone, and a portion of the existing Four-Phase building northwest of the subject reach was also built within the limits of the one percent flood.

Lack of participation by the District would not necessarily prevent the proposed project from proceeding. Channel modifications through this private development could be made without District participation if wholly financed by the developer.

8. ORGANIZATIONS AND PERSONS CONSULTED

Anderson, Keith R., Associate Fishery Biologist, California Department of Fish and Game, Menlo Park, phone on March 30, 1976 and November 23, 1976.

Breitenbach, Frederick "Rick", Fishery Biologist, Division of River Basin Studies, U.S. Fish & Wildlife Service, Sacramento, phone on November 24, 1976.

Foster, K. F., Deputy Sheriff, Santa Clara County, comments at public meeting on February 26, 1976.

Freitas, Michael, Associate Civil Engineer, SCVWD, interviews and phone, 1975 and 1976.

Henley, Albert T., General Counsel, SCVWD, phone on December 1, 1975.

Leonard, Burrel, General Partner, Vallco Park, comments at public meeting on February 26, 1976.

Lester, Will W., General Partner, Vallco Park, comments at public meeting on February 26, 1976.

Sisk, James, Planning Director, City of Cupertino, interview on November 10, 1975, phone on January 16, 1976 and November 30, 1976.

Smith, Walton A., Wildlife Manager, California Department of Fish and Game, phone on November 24, 1976.

Viskovich, Bert, Public Works Director, City of Cupertino, memo to City Council on July 15, 1974, interview on November 10, 1975.

Ward, Walter P., General Manager, Vallco Park, memorandum to SCVWD on May 28, 1975, interview on November 11, 1975, letter November 13, 1975, phone on December 2, 1975, letter January 9, 1976, comments at public meeting on February 26, 1976, and letter October 1, 1976.

Photographs by Winthrop A. Stiles III.

9. BIBLIOGRAPHY

Cupertino, City of, December 1973. Draft EIR, Land Use Element "Core Area", Cupertino, California.

Daniel, Mann, Johnson and Mendenhall (DMJM), June 1974. Vallco Park Regional Shopping Center, Draft EIR, Cupertino, California.

Nolte, George S., and Associates, April 1973. Land Use Element of an Environmental Impact Assessment Report Comparing Two Proposed Regional Shopping Center Sites, San Jose, California.

Santa Clara Valley Water District, March 1975. Proposed Flood Control Project of Calabazas Creek - Bayshore Freeway to El Camino Real, Engineer's Report and Final EIR, San Jose, California.

Stiles, Winthrop A., III, SCVWD, October 1974 and October 1976. Environmental Assessment of the Proposed Channelization on Calabazas Creek at Vallco Park, San Jose, California.

ENVIRONMENTAL IMPACT ASSESSMENT CHECKLIST

Explanations of all "Yes" and "Maybe" answers are required on attached sheets. If impact occurs during construction or is temporary, indicate with a "C" or "T" under Yes or Maybe.

	Yes	Maybe	No
1. Geology and Soils. Will the project result in:			
a. An increased hazard to the public resulting from geologic features of the site (landslide-prone areas, faults, slumping, etc.)?			X
b. Serious disruptions, displacements, compaction, or impervious covering of the soil?	X		
c. Introduction of toxic materials in the soil or reduction of soil fertility?			X
d. Significant change in topography or ground surface relief features?	X		
e. The destruction, covering or modification of any unique geologic or physical features?	X		
f. Any substantial increase in wind or water erosion of soils, either on or off the site?			X
g. Changes in siltation, sediment transport, deposition or erosion which may modify a river, stream, or other body of water?			X
2. Air. Will the project result in:			
a. Generation of air emissions (such as dust) that will seriously deteriorate air quality standards (either locally or regionally)?		C	
b. The creation of objectionable odors?			X
c. Major alteration of air movement, moisture or temperature, or any change in climate, either locally or regionally?			X

	Yes	Maybe	No
3. Water. Will the project result in:			
a. Changes in currents, or the course or direction of water movements?	X		
b. Changes in infiltration rates, sedimentation, drainage patterns, or the rate and amount of surface water runoff?	X		
c. Alterations in the course or flow of floodwaters?	X		
d. An increase in downstream flood potential that might cause property damage?			X
e. Change in the amount of surface water in any body of water?			X
f. Contamination or any detrimental effect on existing water quality or quantities of either surface or subsurface supplies?			X
g. Change in the quantity of groundwaters, either through direct additions or withdrawals, or through interception of an aquifer by cuts or excavations?			X
h. Reduction in the amount of water otherwise available for public water supplies?		X	
4. Noise. Will the project increase existing noise levels during construction or operations to the extent that existing or future residents would be annoyed?			X
5. Plant Life. Will the project result in:			
a. Change in the diversity of species, or numbers of any species of plants (including trees, shrubs, grasses, microflora, and aquatic plants)?	X		
b. Reduction of the numbers of any unique, rare or endangered species of plants?			X
c. Introduction of new plant species into an area, or a barrier to the normal replenishment of existing species?	X		

	Yes	Maybe	No
6. Animal Life. Will the project result in:			
a. Changes in the diversity of species, or numbers of any species of animals (birds, land animals, including reptiles, fish and shellfish, benthic organisms, insects or microfauna)?	X		
b. Loss or disturbance of a nesting area for resident or migrating birds?	X		
c. Reduction of the numbers of any unique, rare or endangered species of animal?			X
d. Introduction of new species of animal into an area, or result in a barrier to the migration or movement of animals (or fish)?	X		
e. Deterioration of existing fish or wildlife habitat?	X		
7. Land Use/Community Plans and Values. Will the project result in:			
a. Alteration or nonconformance with regional, federal, state or local land use plans and policies of the surrounding area?			X
b. Conflict or inconsistency with adopted policies, plans and goals of the community where the project is located?	X		
c. Deterioration of the integrity or quality of the surrounding neighborhood? Loss of privacy or security to residents over the long term?			X
d. Generation of a substantial public controversy resulting from environmental concerns?		X	

	Yes	Maybe	No
8. Economic. Will the project:			
a. Foster economic or population growth, either directly or indirectly, in the surrounding area (particularly if faster than planned for)?			X
b. Remove a major constraint or obstacle to growth?			X
c. Decrease employment in the community?			X
d. Reduce acreage or yield of an agricultural crop?	X		
9. Population. Will the location, distribution, character, or density of the surrounding human population be altered by the project?			X
10. Housing. Will the project adversely affect existing housing or result in the relocation of existing housing?			X
11. Transportation/Circulation. Will the project result in:			
a. An adverse impact upon existing transportation systems?			X
b. Reduction in existing parking facilities, or create demand for new parking?			X
c. Alterations to present patterns of circulation or movement of people and/or goods?	T		
d. Increase in traffic hazards to motor vehicles, bicyclists, or pedestrians?			X
12. Public Services. Will the project result in a need for new or altered governmental services in any of the following areas:			
a. Fire or police protection?			X
b. Schools?			X
c. Parks or other recreational facilities?			X

	Yes	Maybe	No
d. Maintenance of public facilities (streets, highways, public transit, etc.)?			X
e. Flood Protection?			X
f. Other governmental services?			X
13. Utilities. Will the project result in a need for new systems, or alterations to the following utilities:			
a. Power or natural gas?	T		
b. Communications systems?	T		
c. Water?	T		
d. Sewers or septic tanks?	T		
e. Storm water drainage?	T		
f. Solid waste disposal?			X
14. Energy. Will the project result in:			
a. Use of substantial amounts of fuel or energy?			X
b. Substantial demand upon existing sources of energy, or require the development of new sources of energy?			X
15. Public and Environmental Health. Will the project result in:			
a. Creation of any known human health hazard or potential health hazard (excluding mental health but including physical injury)?			X
b. Involve the application, use, or disposal of toxic or hazardous materials?			X
16. Aesthetics. Will the project result in the obstruction or elimination or any scenic vista or view open to the public, or will the project result in the creation of an aesthetically offensive site or structure presently or potentially open to public view?		X	

	Yes	Maybe	No
17. Recreation. Will the project result in an impact upon the quality or quantity of existing recreational opportunities (such as fishing, boating, hiking, horseback riding, bicycling)?			X
18. Archeological/Historical. Will the project result in an alteration of a significant known archeological or historical site, structure, object or building? Is the project in a known archeologically sensitive area?			X
19. Natural Resources. Will the project substantially increase the consumption of an non-renewable natural resource such as minerals, precious metals, prime agricultural land, natural gas, oil, etc.?			X
20. Mandatory Findings of Significance.			
a. Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?	X		
b. Does the project have the potential to achieve short-term, to the disadvantage of long-term, environmental goals? (A short-term impact on the environment is one which occurs in a relatively brief, definitive period of time while long-term impacts will endure well into the future.)	X		
c. Does the project have impacts which are individually limited, but cumulatively considerable? (A project may impact on two or more separate resources where the impact on each resource is relatively small, but where the effect of the total of those impacts on the environment is significant.)	X		

	Yes	Maybe	No
d. Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?			X

DISCUSSION OF ENVIRONMENTAL EVALUATION

1. a. The existing hazard resulting from steep side slopes in some portions of the creek will be eliminated.

1. b. The existing creek will be backfilled with soil to ground level. The surface will be compacted and eventually paved over.

1. d.

and 1.e. See Comment 1. b.

1. g. Backfilling the creek will eliminate a source of downstream sedimentation.

2. a. During construction, dust, particulates and exhaust emissions are likely to exceed standards in the surrounding area. Only one residence will be affected, however.

3. a. The flow of water will be diverted along a new alignment within the underground box culvert.

3. b. Groundwater recharge will no longer occur in the creekbed. This reach is in a moderately good recharge area.

3. c. Enlargement of the Stevens Creek Boulevard culvert will protect surrounding lands from the one percent flood. The creek has adequate capacity.

3. d. To the extent that this reach serves as a recharge area for the groundwater basin, less water will be available for public supply.

5. a. and c. Backfilling the creek will permanently eliminate the existing riparian habitat with no opportunity for reestablishment.

6. a, b. and e. Immobile and slow-moving fauna will be destroyed while mobile species may relocate to other areas of the creek. If competition is too severe, they will not survive.

6. d. Backfilling of the creek will interfere with or eliminate the migration of some species along the creek corridor.

7. a. and b. Development plans for adjacent lands by Vallco Park Limited is consistent with the City of Cupertino's General Plan. However, loss of a riparian habitat conflicts with stated goals of the City of Cupertino's General Plan - Open Space and Conservation Element, the Conservation of Resources Element of the Santa Clara County General Plan, and policies of the Department of Fish and Game, all of which stress the need to preserve riparian habitat and associated wildlife.

7. d. It is probable that many members of the public and organizations concerned with environmental protection will oppose the project.

8. a. and b. Potential flooding is not the major constraint to development of the remaining Vallco Park property. According to the City of Cupertino, lack of adequate roadways continues to be the major obstacle to future expansion of Vallco Park.

8. d. Some marginally-producing orchard trees will be removed to provide right of way for the underground box culvert. Eventually all of the orchard will be removed as development proceeds.

11. c. Some inconvenience to traffic on Stevens Creek Boulevard is likely to occur while the culvert is being enlarged.

13. a. and e. Existing telephone, water, sewerage, gas and storm sewers will be relocated.

16. Replacement of a vegetated creek with parking lots or roadways, even if they are landscaped, usually is judged to be an adverse aesthetic impact. However, some individuals feel that the existing creek is not very attractive; thus, the aesthetic impact is a matter of opinion.

17. The creek is on private land and is not used by the general public for recreation activities, although some people do trespass. The City of Cupertino has not included Calabazas Creek in a future park chain and does not consider the creek to be a significant recreational resource relative to other creeks in the area.

18. This reach of the creek was realigned during the last century by local farmers. The probability of detecting artifacts is minimal due to severe prior disturbance of the creek.

APPENDIX B

emorandum

TO Dr. B. H. Goldner

FROM E. S. Watson

SUBJECT Geologic-Soils Conditions along Calabazas Creek between Interstate 280 and Stevens Creek Road, Cupertino

DATE October 30, 1975

DISCUSSION

On October 20, 1975, a field inspection was made of the subject reach of Calabazas Creek for the purpose of establishing the geologic-soils setting. In addition, the following reports were reviewed for geologic-soils data:

1. "Soils of Santa Clara County", Soil Conservation Series, USDA, 1968.

2. "Potential Seismic Hazards in Santa Clara County, California", California Division of Mines and Geology, Special Report 107, 1974.

Regional Physiographic and Geologic Features

Calabazas Creek, originally a tributary of San Tomas Creek, originates in the Santa Cruz Mountains and then flows northeasterly through the Santa Clara Valley before discharging into San Francisco Bay via Guadalupe Slough. Its headwater is at Table Mountain at an elevation of 2,000 feet, and it flows northeasterly to an elevation of 800 feet through mountainous area underlain by folded and faulted bedrock of the Franciscan Complex. Below 800 feet elevation, the streams continue northeasterly through a foothills area underlain by gently folded, loosely consolidated to uncompacted alluvial Santa Clara Formation before emerging into Santa Clara Valley just north of Saratoga at an elevation of 400 feet. Thereafter, Calabazas Creek flows northeasterly down the gently sloping surface of its alluvial fan before entering San Tomas Creek a mile downstream from El Camino Real.

The proposed improvement area of Calabazas Creek, the discussion of this report, is the portion which extends from Stevens Creek Boulevard to Interstate 280.

Geologic and Soils Conditions of the Subject Reach

The subject portion of Calabazas Creek is cut through young and older valley fill deposits which were deposited as alluvial fans. The young alluvial and older alluvial deposits consist of horizontal beds and lenses of sand, gravel, silt, and clay, aggregating to a thickness of an estimated 1,500 feet. The sand and gravel were deposited as alluvial fans or stream channel deposits and the finer-grained fill deposits were deposited as basin, tidal, or marine deposits.

Based on published data, the detailed description of the geology-soils is as follows (see Figure 1):

Qyf - Young alluvial fan deposit, fine-grained, minor gravel. The surface soil is grayish brown Yolo silty clay loam (CL). The soil type has good natural drainage, no erosion hazard, has slow runoff, and moderate shrink-swell.

Qof - Older alluvial fan deposit, fine grained. The surface soil is dark grayish brown Zamora clay loam (CL). The soil type has good natural drainage, no erosion hazard, has slow runoff, and moderate shrink-swell.

During the field inspection, two sections were logged and areas undergoing extensive bank erosion-failure were mapped (see Figure 1 for sections). The gradient of the creek is 0.7 percent.

In general, the soil profile consists of a CL topsoil zone with intermittent gravelly clay layers to a depth of about 1 1/2 to 4 feet. At this point a thick zone of dark brown CL-CH material showing extensive shrinkage cracking is encountered. The thickness of this zone ranges between 6 to 8 feet. At the base of the CL-CH zone is a tan CL-SC layer about 2 to 3 feet thick, which grades into a tan GC zone of unknown thickness. The creek channel is in the GC zone. Where lateral migration of the creek has been occurring, the channel walls are very steep. Undercutting is present in places. Due to the extensive cracking in the CL-CH zone and undercutting, the walls in these areas are in tension and failures are common. Natural slopes where erosion is not active range from 1:1 to 2:1, but are mostly 1 1/2:1. Some downcutting of the creek channel is occurring. Dumped rubble (concrete, asphaltic concrete, etc.) acts as an obstruction to flow and has resulted in scour holes being formed. This suggests that moderate volume-velocity flows occur during runoff. Spoil piles and fill are located along both sides of the creek. As the banks fail, some of this spoil material enters the channel. Based on slopes of existing banks, it appears that the steep banks will seek 1:1 to 1 1/2:1 slopes.

As reported, two options in regard to the subject reach of the creek are being considered. Two other options can also be considered. The four options are:

1. Leave creek as is, but add riprap at critical locations.

2. Use current alignment, but lay back all slopes to 1:1 or 1 1/2:1 and riprap critical locations.

3. Generally follow alignment, but make some channel changes, place a double 10' x 10' RCB culvert, and backfill.

4. Realign channel and make prism with 1:1 and 1 1/2:1 slopes, and place concrete lining.

The present aesthetic setting of the creek, in general, is that of a "unlined flood control channel" with assorted rubbish and trash along the creek bottom. Small trees are at random locations. The only trees of any size are adjacent to Stevens Creek Boulevard. Vegetation along the bottom of the channel consists of water grass and weeds. The slopes, at places, are near vertical and are failing. Due to the depth of the channel, ranging from 14 to 16 feet, it is very hazardous. High velocity flows are carried in the channel from time to time.

Option 1. Would only require placement of riprap at critical locations to arrest lateral erosion. Bank failures will continue for a period of time until the banks attain a 1:1 to 1 1/2:1 slope. Due to the steep slopes and the shrink-swell character of the bank material, ravel will continue until a natural vegetation cover is established. The aesthetic setting will remain as now exists for a period of time.

Option 2. This will require grading and shaping of the existing slopes. Much of the vegetation will be removed, destroyed, or covered during the grading operation. Riprap would be placed at critical locations to arrest lateral erosion. Vegetation would have to be established on the bare cut slopes to arrest raveling. The aesthetic setting would be similar to the existing setting, unless extensive landscape work was done. The steep channel slopes would constitute a moderate hazard.

Option 3. This option would require rather extensive grading. It is assumed that the grading and backfill volumes would balance. The hazard of steep slopes would be removed. The aesthetic setting would be that of an open field unless landscaping or other improvements were made.

Option 4. This option will require a complete channel change and the existing channel to be filled. The steep slopes would be a hazard if access could be made to the channel. The aesthetic setting would be that of a concrete-lined flood control channel.

Division Engineer
Resources Management Division

Attachment - Figure 1

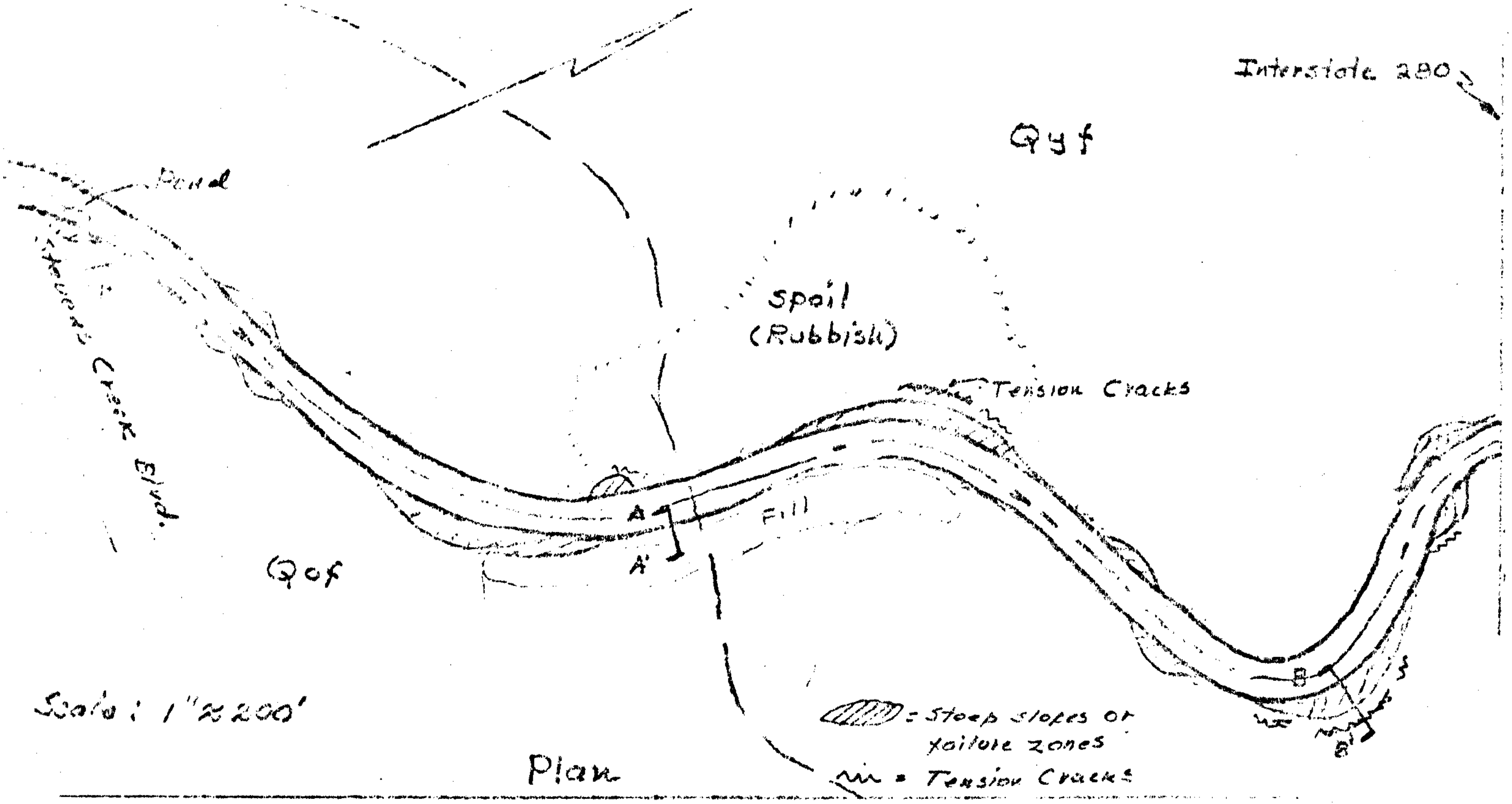
cc: D. Gill
J. Scott

ESW:JBS:jh

SANTA CLARA COUNTY FLOOD CONTROL AND WATER DISTRICT, San Jose, California

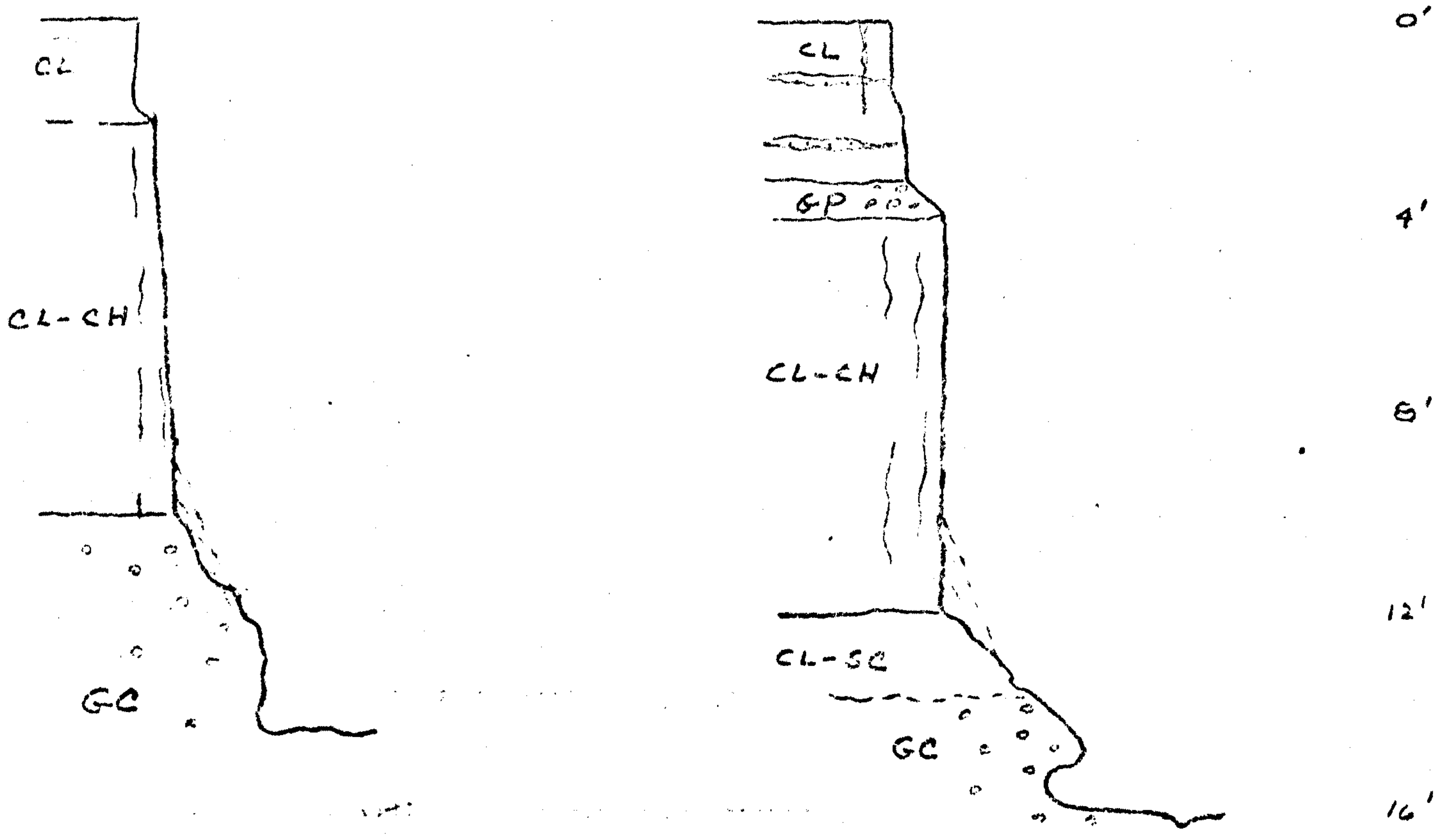
By J.E. Scott Date ____ Chkd. By ____ Date ____ Sheet No. Figure 1 of ____

Subject Calabazas Creek (Stevens Creek Blvd - Interstate 280) Job No. ____



Scale: 1" ≈ 200'

Plan



Section A-A'

Section B-B'

Sections

cale 1" ≈ 4'

APPENDIX C

Santa Clara Valley Water District

THE ONE PERCENT FLOOD

The one percent flood is that flow of water from a drainage area that has a one percent chance (probability of 0.01) of occurring in any given year. It is equivalent to the so-called 100-year flood, but it should not be thought of as an event that occurs regularly every 100th year. Instead, it is the flood flow event that would be equaled or exceeded about 100 times in 10,000 years. It is also possible that two repetitions of this flood flow could occur in a single year, or that a single event may not occur even once in 200 years.

The "one percent flood" is the preferred description of the design flood. However, the term "100-year flood" is equivalent. Unfortunately, this latter term often leads to the misconception that the design flood occurs only every 100th year.

Another terminology problem is the relation of the one percent storm and the one percent flood. The storm magnitude relates to flood magnitude through a complex set of parameters such as antecedent rainfall conditions, drainage basin shape, length, slope, orientation, and others. Therefore, a one percent storm will not necessarily produce a one percent flood. The one percent flood should not be confused with nor should it be referred to as the one percent storm flood.

The one percent flood has a small risk of occurrence in a given year, but this risk is accumulative. When compared with the 30-year life of the average home loan, for example, the chance that it will occur is quite large. During the 30-year loan period, the chance that a one percent flood will occur, or be exceeded, approaches 30 percent.

The magnitude of the one percent flood must be calculated using statistical hydrological (stochastic) methods. Since it is the desire of the District to provide equal protection from flooding to all residents, a uniform method of determining design flood flows is required; one that is regional in scope and one that minimizes the chance of providing unequal protection from one area to another. This objective is reached through a regional peak flood frequency analysis that uses the best available hydrologic data from stream systems in and adjacent to the District. The regional process utilized by the District was developed after considerable effort and has been reviewed and approved by the academic and professional community.

The research on the statistical measurement of flood flows and frequencies has shown that the larger magnitude floods that occur at relatively infrequent intervals, such as the one percent flood, are products of extremely heavy rainfalls, either exceptionally high intesity or of long duration. With exceptionally high-intensity rainfall, so much rain falls in a short period of time that no matter what the ground cover is - soil, pavement, grass, trees, or buildings - the water cannot be stored or soaked up, and it runs off in a flood. With long-duration rainfall, a lot of rain falls, but it comes over a long period of time. Bare soil, grassland, forests, landscaping, house roofs, and pavement become fully saturated, and flooding occurs when no more water can be absorbed, stored, or evaporated. Thus, for large floods, the type of development or degree of urbanization that exists in the total watershed has essentially no effect on the magnitude of the peak flood flow that is generated.

However, the situation is different for the small magnitude floods which occur at frequent intervals. In these, the rainfall intensity is less or of shorter duration. The absorption, holding, or storage characteristics of the land are much more important. With much less water present, soil, grass, and forests tend to soak up and hold back the rain that falls, while pavement and house roofs let a large percentage run off.

Therefore, when grassland is converted to pavement, the amount of water that runs off is much greater for the small amounts of rainfall. The magnitude of the small, more frequent type of flood flow is increased by urbanization.

In discussing flood flows and urbanization, there is one additional factor that should be mentioned. This is over-bank storage in floodplain areas. Where urbanization occurs in the floodplain and the stream is channelized, the storage of over-bank floodwaters is reduced. This results in greater downstream flood flows. This increase in flood flows occurs for any magnitude or frequency of flooding that would have resulted in channel overflow and storage of waters in the floodplain.

Lloyd C. Fowler
October 21, 1974

RESOLUTION NO. 74-40

STATING POLICY OF
SANTA CLARA VALLEY WATER DISTRICT
REGARDING LANDSCAPING OF DISTRICT PROJECTS

In the interest of minimizing the impact District projects may have on the environment and to enhance the aesthetic values of the community as well, the following statement of policy regarding landscaping is hereby adopted:

1. Completed District projects will be landscaped where the District has fee title ownership, and subject to the availability of funds. These landscaping projects shall be developed in cooperation with the Cities and County of Santa Clara in order to develop a priority of importance and, where possible, the costs of design, installation and maintenance may be shared with the local jurisdiction.

2. In the design of new District projects a concerted effort shall be made to save and integrate with the project all significant vegetation and habitat.

3. All new District projects shall be designed with aesthetic concern, and landscaped. Consideration shall be given to reestablishment of riparian habitat. The provision for such aesthetic treatment and landscaping shall be a part of the project design.

4. Where the removal of a tree is required for essential maintenance, a reasonably mitigating replacement shall be made in the same neighborhood.

5. In general, the landscaping installed at District projects shall be a low maintenance type, adapted to the climatic and soil conditions, and

suitable for use under the situation imposed by the District project. In order to conserve water and energy, plant materials used should not require irrigation after a short establishment period.

PASSED AND ADOPTED by the Board of Directors of Santa Clara Valley Water District on MAY 14 1974 by the following vote:

AYES: Directors J. CHIRI, M. E. DULLEA, P. T. FERRARO, J. J. LENIHAN, E. A. MIRASSOU, C. RUSH, R. T. SAPP.

NOES: Directors NONE

ABSENT: Directors NONE

SANTA CLARA VALLEY WATER DISTRICT

By: Joseph Chiri
Chairman of the Board of Directors

ATTEST: VIOLET V. ENANDER

Violet V. Enander
Clerk of said Board of Directors